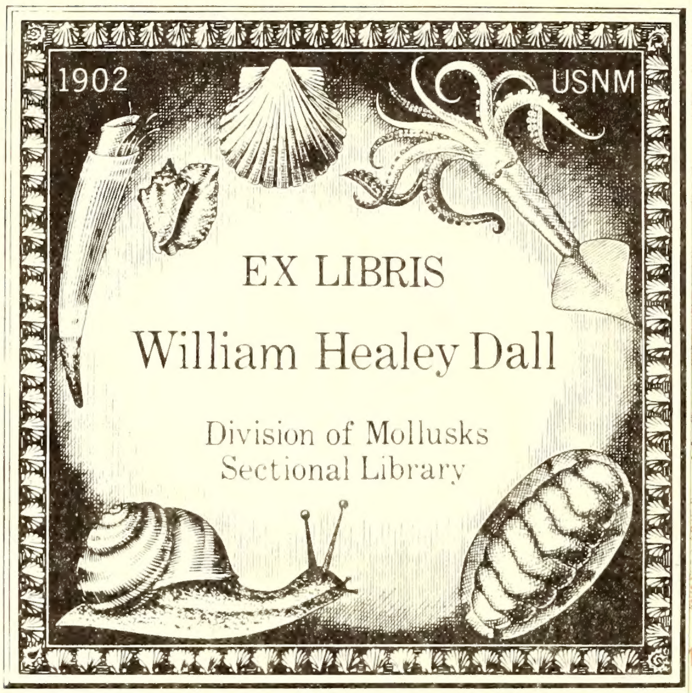

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MINUTES 76
JAN 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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PROPOSED WESTERN BRANCH OF THE AMERICAN MALACOLOGICAL UNION

The formation of a Pacific Coast group to meet annually has been frequently discussed. The president of the A.M.U., Dr. A. Myra Keen, appointed a committee to consider the proposal, with the result that a meeting is to be held in Los Angeles on April 10-11. The plan is to organize and apply to the American Malacological Union to be the authorized Pacific Coast Branch.

The selection of the above dates was largely due to the fact that the Cordilleran Section of the Geological Society of America is holding it's annual meeting in Pasadena on April 9 and 10. The Paleontological Society (Pacific Coast Branch) meets in conjunction with it. Inasmuch as many of our members are also members of the other organizations and some of them would find it impossible to get away to attend two meetings in the spring, it is proposed to hold our meeting to conclude the day following the other.

More information will appear in the next issues, but we hope that our out of town members will begin planning now to be with us.

COLLECTING LAND SNAILS ON THE WEST SIDE OF THE SIERRAS

By Wendell O. Gregg

In the latter part of May,1947, a collecting trip was made thru eastern central California, principally thru Tulare.,Fresno,Madera,Mariposa,Tuolumne,Calaveras,Amador,El Dorado, and Sacramento Counties. On this trip I was accompanied by Mr. M.L. Walton, veteran lepidopterologist, who in recent years has added to his collections a fine cabinet of western non-marine shells. We had nine days for the trip but the territory was large and many of the localities would require long hours of arduous toil. Our principal objective was to secure topotypes of land snails which could be used as a basis for comparison in our subsequent studies. Many of the snails we were after were either scarce, rare, or almost impossible to find. When we did find them in abundance, only enough were taken to supply our immediate needs and we hurried on to the next locality. All animals (soft parts) were carefully preserved for dissection and study.

We left Glendale at 5 A.M. on May 24,1947. After passing thru Bakersfield and Tulare, we stopped at Visalia for gasoline and a few grocery items. Our first stop for shells was at a swamp seven miles east of Visalia. Here in swampy pools we found *Musculium truncatum* Linsley and *Helisoma tenue californiense* Baker. Under pieces of rotten wood nearby were specimens of *Discus cronkhitei anthonyi* (Pils.). The altitude here was about 500 feet, some contrast to lofty mountain habitats where I have usually found them.

We continued our journey to Sequoia National Park, stopped opposite Giant Forest Lodge, and ate our lunch amid lofty sequoias. A noisy jay screamed at us loudly from a nearby stump till I threw him a crust of bread which was promptly carried away. A robin flew close, scolding for the partiality. A crust was thrown to the robin which went close, looked it over carefully, then left it and turned away chirping his disgust. If it was cherry pie he wanted, we did not have any. While we ate our lunch the jay returned repeatedly for more crusts, sometimes stopping to eat a portion before carrying them away. Not far away a deer poked his head out of the underbrush and watched us curiously, as if thinking what queer animals, these people. Our lunch finished, we enjoyed another drink of cold water from the nearby brook and we were ready to look for snails.

This is the type locality of *Helminthoglypta tularensis* sequoia Pilsbry. The altitude is about 6,4500 feet. Soon we were finding fine specimens of *H. t. sequoia* under old logs and pieces of bark. We went about 200 yards along the creek while collecting these. Under the logs were noted brightly colored, orange and black sierra salamanders (*Ensatina sierra* Storer) and a single specimen of the Pacific rubber snake or rubber boa (*Charina bottae bottae* (Blain.). An hour later we had a fine series of *H. t. sequoia* and were ready but reluctant to leave this place of enchantment.

We traveled northwest along the road to General Grant National Park, then turned south along the road to Whittaker Forest,a state park. Here is another grove of " big trees". The altitude is about 5,500 feet. It was getting late but we stopped

at several places between the road junction and the public camp without much luck. Whittaker Forest is the type locality of *Helminthoglypta tularensis pluripunctata* Berry. Numerous slime trails were seen and here and there were fragments of broken shells. We even found egg masses, but no live *Helminthoglypta*. Feasting on the egg masses were fine specimens of *Haplotrema alameda fieldi* Pils. We were tired and hungry, so discontinued collecting efforts for the day.

A short distance beyond, we found the public camp which was practically deserted and very much neglected. I set up our camp while Mr. Walton cooked dinner. Soon the dinner was completed and after the usual *feste* of tall yarns we tucked ourselves snugly in bed to rest for another day of adventure.

Sunday, May 25, we were up with the dawn and soon the smell of the forest was mingled with the aroma of frying bacon and eggs. After breaking camp we journeyed about a half a mile beyond where we found collecting very satisfactory. Here we found fine specimens of *H. t. pluripunctata* Berry and *H. napaea* Berry, also more *Haplotrema alameda fieldi* Pils.

H. tularensis pluripunctata Berry was described from a single specimen. Without seeing any actual specimens, Dr. Pilsbry placed *H. t. pluripunctata* in the synonymy of *H. t. sequoia.* With fine sets of topotypes at hand for comparison, it is obvious that these two forms are distinct. H. *t. pluripunctata* is larger, less elevated, and has a more open and larger umbilicus. Besides this there are distinct differences in the sculpture. It will be interesting to learn what differences, if any, are brought out by a comparative study of the anatomies of the two forms.

Our next objective was the type locality of *Monadenia mormorum loweana* Pilsbry, the " road to Huntington Lake, in the San Joaquin River Canyon, Fresno County". Published localities like this have sent us on many a & snipe hunt" and we have ended up " holding the sack". However, in this case the error is obvious. The Road to Huntington Lake has nothing to do with the San Joaquin River Canyon. But the road to Huntington Lake is a long road and we could not expect to find these rare snails just anywhere. In the collection of Dr. S.S. Berry is a set of *M.m. loweana* marked " topotypes" and with a label reading "Near Ockenden, on the Huntington Lake Road, Fresno County". This, incidentally, is also the type locality of *Helminthoglypta napaea fresno* Pils.

Leaving Whittaker Forest, we missed the more direct road thru Squaw Valley and went south thru Badger, then turned north again at Dinuba and reached the Huntington Lake road after passing Centerville. Soon we were going over the steep grades which take one well above 5,000 feet elevation. The later maps do not show Ockenden but after inquiring at Pine Ridge we knew what to look for. The site of a former tavern known as Ockenden is now marked by a rock fireplace and chimney. This is on the east side of the highway, about 3.7 miles south of Shavers Lake. At points .5 and .9 mile south of Ockenden we found snails. *H. n. fresno* was found at both localities. At .9 mile south of Ockenden we found a fine set of *M. m. loweana*. The altitude here was about 5,600 feet. The snails were found mostly under slabs of bark.

Sunday night was spent at a cabin near Shavers Lake. The morning of May 26th, we retraced our way down the mountain as far as the junction with the Auberry road, then turned north thru Auberry, North Fork, past Bass Lake, and then on thru Madera County to Yosemite National Park.

After passing the park boundary, we saw interesting looking territory a short distance south of the checking station and stopped to try our luck. It was rather dry and some of the forest here had been burned over in recent years. In one pile of debris, I found two live specimens of *Helminthoglypya napaea wawona* Pilsbry and a fragment of *H. proles mariposa* Pils. We also found another specimen of the rubber boa. This one I kept and it is now carefullt preserved in my collection.

After passing the checking station, we turned east to the Mariposa Grove of sequoias. This is the type locality of *Helminthoglypta proles mariposa* Pils. After stopping at two places and finding *H. p. mariposa* at each stop, we continued to the Mariposa Grove Lodge. On a damp meadow nearby, we collected *Trilobopsis loricata mariposa* Pils. and *Vitrina alaskana* Dall under debris. This location is directly across the highway from the lodge.

Returning to the main highway, we continued north to Wawona, then took the Chilnualna road to Chilnualna Camp where we secured a cabin for the next two nights. The cabin was nothing fancy, but it was a shelter from the rain and there was plenty of stove wood to keep our fire going.

The next day, Tuesday, May 26th , there was a gentle rain which continued most of the forenoon. We first hiked about a mile to Lower Chilnualna Falls. At this locality about two and one half hours were spent turning rocks.(Most of them were too heavy to move) For our efforts we were rewarded by finding three specimens of *Monadenia hildebrandi* (Newc.), two adults and one juvenile, also two specimens of *Helminthoglypta nepaea yosemitensis* Pils.

We next continued north on the main highway to Alder Creek. The rain continued and we were getting damper and colder. I had always wanted to see Yosemite National Park when it was not hot and dusty. This time I was getting my wish. Collecting for a couple of hours or more at Alder Creek produced the following results: *Monadenia hildebrandi* (Newc.) (3 specimens only, found under bark), *H. n. wawona* Pilsbry (topotypes), *H. p. mariposa* Pils. , and *Zonitoides arboreus* (Say). Dr. Pilsbry (1939, p. 61) gives a fabulous account of 276 specimens of *M. hildebrandi* (250 adult and 26 immature) being taken here in two consecutive evenings collecting by lantern by Allyn Smith. I was not surprised to learn later that the figures here referred to are strictly typographical errors, the exact numbers should read 25 adult and 26 immature specimens. As we left Alder Creek, it was still raining. For some distance we drove thru fog. We continued on to Yosemite Valley. The rain also continued. At Yosemite Village we stopped at a restaurant and found the service highly unsatisfactory.

After a delay of nearly one and one hald hours trying to get something to eat, we went to Cascade Creek where a few

fragmentary specimens of *M. hildebrandi* were fouhd. Next we continued west down the Merced River Canyon past the west entrance to the park to a location 3 miles below El Portal. This is the type locality of *Helminthoglypta allynsmithi* Pils. The elevation is about 2,000 feet. South of the highway on a hillside we found a rather extensive slide of small rocks. The slide was well concealed under a thick layer of leaf mould and above this was a luxuriant growth of poison oak. For about a year preceeding this trip I had been taking Cutter's " Poisonok Concentrate" and as I learned later this had appreciably lessened my susceptability to this plant. In this rockslide we found a small form of *Monadenia hildebrandi*. *H. allynsmithi* (all specimens of both dead), and a form of *Haplotrema* which Dr. Pilsbry mentions in connection with typical *H. alameda* Pils. (1946, p. 216). At one time while working this rock slide I heard Mr. Walton yell and I looked up in time to see him killing a rattlesnake which had crawled out of the rocks a few inches from his hand. On these trips we always wear high leather boots and thick leather gloves as a protection against snakes.

Our collecting in Merced River Canyon completed, we returned to our cabin at Chilnualna Camp where we spent a second night. Wednesday, May 28th, was our last day in Yosemite National Park. Remembering our luncheon experience of the day before, we started out with a quart thermos bottle full of coffee and our own supply of sandwiches. Our first project was a hike to Vernal Falls. We collected along the trail and also a short distance below the falls. This is the type locality of *H. nepaea yosemitensis* Pils. and *M. hildebrandi yosemitensis* (Lowe). The following were found: *H. nepaea yosemitensis*; *M. hildebrandi yosemitensis* (1 live and several dead specimens), and *H. proles mariposa*. Not satisfied with our luck on the south side of the canyon, we came back over the bridge and went along the old trail on the opposite side of the canyon. Here our luck was no better. We returned to the car, enjoyed our sandwiches and were ready to leave Yosemite.

We turned north along the Big Oak Flat Road, past Crane Flat, then northwest thru the Tuolumne Grove. Here we stopped and collected a form of *M. mormonum*, along with the widespread *H. proles mariposa*.

We continued to Sonora. This route is thru the old "gold rush" country past many places of historical interest. Here and there were buildings built of brick or stone, with solid iron doors and shutters, ample protection from outlaws in the " good old days". We reached Sonora where we secured a cabin for the night.

The first objective for Thursday, May 29th, was the type locality of *Monadenia mormonum hirsuta* Pils., " Mountain Pass, Tuolumne Co.". To this locality data, Dr. Hanna adds, " This is a point where the road from Stockton to Sonora passes to the right of a large exposure of black basalt. The shells were found among the loose rocks at the base of this lava cliff." (See Pilsbry, 1929, p.60). On two previous collecting trips, Mr. Walton had been unsuccessful in locating Mountain Pass. We went to the local office of the American Automobile Association and got the needed information. The locality is southwest of Sonora, 1 mile south of Yosemite Junction and .7 mile south of the Mountain Pass Ser-

-ice Station. Most of the rocks were large and hard to move. We collected about 20 specimens of *M. m. hirsuta* but all of them dead and most of them in very bad condition. One of my specimens, not quite mature, had fresh epidermis showing the typical characteristics of this subspecies. A few specimens of *H. cypreophila* (B. and B) were also found here.

We next passed thru Copperopolis and turned northwest on Highway "4". Three miles from Copperopolis we stopped and found live *Helminthoglypta cypreophila* under old logs. Continuing on Highway "4" to the Nassau Valley Road, we turned left into that valley. This is the type locality of *Monadenia mormonum buttoni* (Pils.) and where a year before Mr. Walton found three fine specimens of that subspecies. The valley was very hot and dry. It had been cut over and later burned over and was a rather uninviting place for a snail collector. We did however, find slime trails in one pile of logs, but no snails. This was one locality where we failed completely. We hope to try here again when weather conditions are more favorable.

Leaving Nassau Valley, we returned to Highway "4" and continued thru Altville,Angels Camp, and Vallecitos to Murphy. Then we turned northwest, past the road to Mercer Cave to San Domingo Creek. We stopped for awhile near the bridge but could only find a couple of *Ariolimax columbianus* (Gould). Then retracing our route a short distance on this road which lies between Murphy and Sheep Ranch, we turned west on a road paralleling San Domingo Creek. At a point .3 mile from the road junction (2.3 from Murphy) we turned our attention to a hillside on the south side of the road. Here was a most inviting looking rock slide: inviting except for the fact that it was covered with poison oak. At this location we found *Ammonitella yatesii* (Cooper) fairly abundant. We also found a very fine form of *Monadenia mormonum* and a few *H. cypraeophila.*

Thursday night was spent at a cabin in Murphy and the following day we continued on Highway "4" to Calaveras Big Trees State Park. Here we found *M. m. cala* Pils. fairly abundant under pieces of bark and old logs.

Friday night was spent at Placerville. Unable to find a cabin here, we secured a room in a very old hotel where I fancied I could smell the scent of gunsmoke still lingering since the days when the miners were " feudin and fussin".

Saturday morning we continued north past the Folsom Prison to the type locality of *Trilobopsis penitens* (Hanna and Rixford) on the south bank of the south fork of the American River, about 1 ½ mile east of the Folsom Penitentiary, Sacramento County, near the hamlet of Mormon Island. Here we found *Trilobopsis penitens*. *Zonitoides arboreus*, *Prophysaon andersoni*, and an immature *Vespericola*, probably *hapla* (Berry).

We next turned homeward. In the vicinity of Stockton we stopped here and there looking along the irrigation ditches for the introduced *Vivipara malleatus* (Rve.). Live specimens were quite scarce but everywhere along the banks of these ditches were numerous broken shells left by animals which had eaten the snails. I suspect muskrats but this is only a guess. Continuing southward , we stopped at the Tuolumne River south of Waterford. On the south bank, on the east side of the bridge we collected

Helminthoglypta allyniana (Berry) in a pile of rocks left behind by placer dredging operations. Nearby there was a huge dredge which had been used in these operations but long since abandoned.

About three miles south of Waterford in an irrigation ditch we found *Fossaria obrussa* (Say) ,*Radix auricularia* (Linne), *Helisoma tenue californiense* F.C. Baker,*Pseudosuccinea columella* (Say), and a *Physa.* This is the most southern authentic record I have of *F. obrussa* in California. Many of our California records for that species should be referred to *F. modicella* (Say). Further east it extends as far south as Chihuahua,Mexico.

Our collecting was over for this time. We spent the night at an auto camp north of Fresno and the following day, June 1st, we returned home. We had travelled 1272 miles, collected 35 different species and subspecies of mollusks, visited type localities of 16 species and subspecies and collected topotypes of 15 different species and subspecies.

Literature Cited

Pilsbry, H.A.: 1939 Land Mollusca of North America (North of Mexico) Vol. 1, Part 1. Academy of Nat. Sci. of Phila.,Monograph No.3.

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SOME MARINE SHELLS FROM SOUTH QUEENSLAND

By Walter J. Eyerdam

In 1924 I worked as cooper on the schooner Bianca in the herring fishery around the Kodiak Islands. The ship was used as a herring saltery for this one season and was wrecked in a snowstorm on the Challam Reef,Strait of Fuca on it's return voyage from Alaska in the winter of 1924. This sailing ship was one of the largest ever used on the North Pacific coast being over 2,100 tons net tonnage. It was built in the U.S.A. for the Australian government during World War I but only made one round trip from the states. It was found to be too unwieldy to handle and therefore unprofitable to the trade. In Australia she made two stops, one at Sydney and the other on the south coast of Queensland.

Before we left Seattle I found a barrel with a few gallons of unsifted fine coral sand that had been used to scour the decks. This sand from the south coast of Queensland came from a beach apparently quite prolific in molluscan life. The 65 species on the following list were sifted from about 1½ cubic feet of beach sand which having been taken at random represents a high percentage. These shells were submitted for identification to Dr. Bartsch. Comparing this list with a long list of Queensland shells compiled by Hedley they belong more typically to the New South Wales faunal zone than to the Queensland zone which is also in conformity with the coast where they were found.

Ostrea edulis Linne is also found in Europe while *Crepidula aculeata* has even a wider distribution. I have it from various parts of Australia, S. Africa, West Indies and from a number of localities from Mazatlan, Mexico to Valparaiso, Chile. It is also found in Southern California and is apparently world wide in distribution in the warm seas.

Con.

1. Cantharidus fasciatus Menke 2. Monodonta (Austrocochlea) zebra Menke. 3. Astraea sirius Gould. 4. Liotia angasi Crosse 5. Monilea (Minolea) angulata A. Adams 6. Gibbula picturata Ad. & Ang. 7. Calliostoma decoratum Philippi 8. Alectrion labecula A. Adms. 9. Alectrion munieriana Crosse 10. Calyptraea sp. 11. Trochita calyptraeformis Lam. 12. Crepidula aculeata Gmel. 13. Natica stricta Verco 14. Marginella (Glabella) tridentata Tate 15. M. (G) australis Hinds 16. M.(G) subbulbosa Tate 17. M. (G.) turbinata Sby. 18. Batillaria australis Quoy 19. Bittium granarium Kiener 20. C Cerithium sp. 21. Columbella (Mitrella) lincolnensis Rve. 22. Epitonium jukesianum Forbes 23. Ringicula denticulata Gould 24. Vermicularia flava Verco 25. Merelina novariensis Frauenfeld 26. Rissoa sp. 27. Rissoina sp. 28. Alaba sp. 29. Cerithiopsis sp. 30. Seila sp. 31. Turbonilla (Cingulina) sp. 32. Odostomia(Evalea) sp. 33. Pyramidella (Syrnola) sp. 34. Haminoea cymbalum Q. & G. 35. Tritonidea sp. 36. Trophon paivae Crosse 37. Ostrea edulis L. 38. Ostrea sp. 39. Arca (Scapharca)traperia Desh. 40. Arca (Barbatia) laminata Angas 41. Glycymeris queenslandica Hedley 42. Corbula zealandica Quoy 43. Donax cardioides Lam. 44. Mactra pura Desh. 45. Mesodesma sp. 46. Dosinia sculpta Hanley 47. Dosinia sp. 48. Pitaria undulosa Lam. 49. Chione striatissima Sby. 50. Chione sp. 51. Venerupis crenata Lam. 52. V. carditoides Lam. 53. Venericardia sp. 55. Solen sloanei Gray 56. Cardita crassicostata Lam. 57. Lucina sp. 58. Pecten sp. 60. Macoma sp. 61. Loripes lucinalis Lam. 62. Diplodonta (Felaniella) sp. 63. Lima angulata Sby. 64. Anomia australica Rve. 65. Modiolus australia Gray.

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MEXICAN LOCALITIES OF SHELLS ILLUSTRATED IN F.C.BAKER'S " THE MOLLUSCAN FAMILY PLANORBIDAE", 1945

Compiles by Robert J. Drake, Albuquerque, New Mexico

All references to Helisoma tenue applanatum (von Martens) should be considered as reading " H. tenue pertenue F.C. Baker". On page 149 of the Monograph, Baker states that applanatum von Martens is preoccupied.

Abbreviations

D-Drepanotrema H- Helisoma T- Tropicorbis

No locality given:
  T. bourcardianus (Preston) (Pl. & fig.:132:31,32
State Unknown:
  Catamas Lake, El Abra:
    T. obstructus (Morelet) 134:10,11
    T. orbiculus (Morelet) 129:16
  Los Canoas:
    T. orbiculus dunkeri F.C. Baker 129:32-36
  Tamosopo:
    T. obstructus donbilli (Tristram) 134:21,23
Baja (Lower) California
  Laguna,Santa Rita:
    D. cultratum anitense (Cooper) 126:17-19
  Santa Anita:
    D. peninsularis (Cooper) 128: 23-25

Vallecitos:
H. tenue applanatum (von Martens) 99:1
Chihuahua:
Lanos River:
H. tenue applanatum (von Martens) 97: 26-28
Colima:
Manzanillo:
T. bourcardianus (Preston) 135: 17-19
Distrito Federal:
City of Mexico:
H. tenue bourcardi (C. & F.) 97:12-17
Lake Texcoco:
H. tenue (Philippi) 97:7,8
Platpa:
H. tenue (Philippi) 97: 1-4
Jalisco:
Lake Chapala, near Guadalajara:
H. contrerasi (Pilsbry) 102: 3-4
Michoacan:
Lake Patzcuarco:
H. tenue exaggeratum (von Martens) 97:18-25
Nayarit:
Santiago, 30 mi. S.W. of:
T. gracilentus (Gould) 135:32-35
Tepic:
T. tepicensis (von Martens) 133:4-9
Oaxaca: No locality given:
H, tenue chapalense (Pilsbry) 102:5-10
Tehuantepec:
T. petenensis Morelet 133:1-3
Quintana Roo:
Cozumel Island, San Miguel:
T. orbiculus (Morelet) 129:1-4
San Luis Potosi:
Coy River:
H. tenue strebelianum (F. & C.) 99:26
Chamiai Creek, below Valles:
T. orbiculus (Morelet) 129:10-15
Penasco (5 mi. N. of S.L.P.)
H. tenue strebelianum (F. & C.) 99:16-19
San Dieguito, west of:
D. cultratum panuco Pilsbry 128:3-5
Valles:
T. obstructus (Morelet) 133:34,35
T. orbiculus (Morelet) 77:7-9
Sinaloa:
Mazatlan:
H. tumens (Cpr.) 100:31-37
Sonora:
Soroyta Creek:
H. tenue sinuosum (Bonnet) 98:14
Yaqui River, mouth of:
H. anceps (Menke) var.? 83: 23-25
Yaqui River, near Ciudad Obregon:
H. tenue applanatum (von Martens) 98:2-6; 99:2,3

State of Mexico:
  Valley of Toluca:
    H. tenue (Philippi) 97:6,10
Tamaulipas: No locality given:
    H. tenue strebelianum (F. & C.) 99:25
  Alta Mira:
    H. tenue strebelianum (F. & C.) 99:27-30
Veracruz: No locality goven:
    H. caribaeum (Orb.) 100:14-17
    H. tenue (Philippi) 97:9
    T. orbiculus (Morelet) 129:5-9
  Coatzocoalcos:
    T. shimeki F.C. Baker 134:28
  Laguna de Tamos, near Tampico:
    H. tenue (Philippi) 97:5
  Orizaba:
    H. tenue (Philippi) 97:11
    H. tenue applanatum (von Martens) 98:1
  Tampico:
    D. cultratum panuco Pilsbry 128:1,2
    T. obstructus (Morelet) 128:26-30
    T. obstructus donbilli (Tristram) 131:15-24
    T. orbiculus dunkeri F.C. Baker 129:26-31
Yucatan:
  Merida:
    T. maya (Morelet) 130:13-17
  Piste:
    T. obstructus (Morelet) 133:28-33

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- Dec.

Dr. Gregg called the December meeting of the Conchological Club of Southern California to order. There were 23 present.

Mr. Burch reported that plans were made for the western malacological group to meet in Los Angeles April 10-11.

A number of letters had been received from collectors in various parts of the world which always gives an interesting touch. Mrs. Effie Clark, P.O. Box 511, Yuba City, Calif. writes that she is settled and now ready to work with the shells.

Mrs. Burch moved and it was seconded and carried that the secretary be instructed to send Mrs. Clark Christmas greetings from the club.

The next order of business was the grab-bag where all found exchange gifts of shells. We had the pleasure of seeing a beautiful marine painting which the artist H. Arden Edwards gave to Mr. and Mrs. Burch in appreciation of their work at the Monterey meeting.

Mr. and Mrs. Clifton Bovee were presented to the club as prospective members. They have just returned from a year in Brazil.

A number gave reports on the recent collecting trips but the sum total seemed to consist more in blistered heels,getting stuck in the mud and unravelling redtape than in gathering shells, at least when compared with past years, when sometimes it was a " case of slaughtering not collecting".

The nominating committee's report was accepted and the secretary was ordered to cast the ballot for the following officers:

President- Mr. E.P. Chace
Vice-President- Mr. H.R. Turver
Secretary-Treasurer - Mrs. A.W. Gillis

Dr. Gregg presented the gavel to Mr. Chace, who then adjourned the meeting. Respectfully submitted,
Harriette Gillis

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PUBLICATIONS RECEIVED

The Nautilus, Vol. 61, No. 2, October,1947. There are several articles in this issue of interest to Pacific Coast students. Dr. William Marcus Ingram and Ann Peterson: Food of the giant western slug, Ariolimax columbianus (Gould)- Dr. Ingram and Karl W. Kenyon: Anodonta and associated mollusks from Stow Lake Golden Gate Park,San Francisco, Calif. Maxwell Smith: A Recent Perplicaria and other new Panamic Marine shells. 7 new species from Panama are described, a very interesting group. An account of the A.M.U. Thirteenth Annual Meeting at Pacific Grove by Aurele La Rocque. The paper by Henry Dodge on Lamarck&s Prodrome is a genuine contribution and will be appreciated by those who have endeavored to understand Lamarck's conception of genera. Under Notes and News Dr. Rehder reports the presence of Arion ater (L.) in Oregon.

Catalogo De Los Molluscos De Cuba- by Carlos Guillermo Aguayo and Miguel L. Jaume. The first 160 pages have been received. It is Mimeographed on on good bond paper of standard size 8½" x 11". The type and origin of each genus is given, and the distribution and original reference for each species. It is a valuable work and should be in every conchological library.

The price is $3.00 for 200 sheets and it is expected that the entire work will exceed 1,000 sheets. If not now ordered write Miguel L. Jaume, 13th Street No. 351, Vedado, Habana,Cuba.

Basteria- Vol. 11, No.4, p. 89-112 20- XI - 1947. This is the publication of the Netherlands and this issue seems to be entirely devoted to their own fauna.

Circulares De La Sociedad Malacologica " Carlos De La Torre" Museo Poey, Universidad de la Habana pp 79-89 inc.
This issue is largely devoted to reports on the studies of Schistosoma mansoni

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Tropical Photographic Laboratory, P.O. Box 65, Winter Park, Florida. Here is something new and should be met with an enthusiastic reception. Colored slides of shells - standard size (2 x 2 - 35mm.) for projection on screen or for use in connection with small hand viewer. The prices are very low and this service should be used by teachers as well as clubs interested in lecture material. The announcement states "Univalve shellfish shown extended as in life..."

Mr. A. Sorensen and party including his daughter, Mrs. Whelchel, Mrs. John Q. Burch, Mr. and Mrs. John Strohbeen have been in Guaymas, Mexico collecting for the past several weeks and plan to remain until February. Collecting is reported excellent with many rarities and fine shells being found. Mr. and Mrs. H. Arden Edwards and Mr. and Mrs. H.R. Turver were with them for several weeks and have just returned with a fine catch. Mr. Arthur C. Price is another member of the party. Several others are making plans to leave immediately to enjoy the January tides in the Gulf. No doubt we will hear a great deal more about these trips.

J.W. Brookshire. Brookshire Ranch, Pala, Calif. Christmas card from Jack giving this new address.

Carl W. Erickson. 4 Windsor Ave., Auburn, Mass. The Worcester Club continues active... " recently received note from Percy A. Morris, author of the Shell Guide, in which he said that the New Haven Club is inactive at the present time.... it was decided to suspend meetings until next spring... The Worcester group attended a meeting of the Boston Club recently at which Dr. Pilsbry spoke.... We have started a project of listing all the known land and freshwater shells of Worcester County. ..."

Ralph O. Fox. Berkeley, Calif. Reports just added a room to the home for den and library. " Spent 4 pleasant hours with Allyn, Doc Hanna-Hertlein at CAS. Doc was sealing material in tubes (as demonstrated at the AMU convention).

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THE NOISE THAT TIME MAKES by Dr. Merrill Moore

The noise that Time makes in passing by
Is very slight but even you can hear it,
Having not necessarily to be near it,
Needing only the slightest will to try:

Holt the receiver of a telephone
To your ear when no one is talking on the line,
And what may at first sound to you like the whine
Of wind over distant wires is Time's own
Garments brushing against a windy cloud.

That same noise again, but not so well,
May be heard by taking a small cockle-shell
From the sand and holding it against your head;

Then you can hear Time's footsteps as they pass
Over the earth brushing the eternal grass.

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The Complete Egoist- Arthur Guiterman

A mollusk who dwelt in primordial slime
   Was always himself to the innermost core.
As being himself took up all his time
   He never did anything more

Still, just as he was though long ages have flown,
   He stands on the specimen shelf,
A fossil, immortal in durable stone,
   A monument raised to himself.

MINUTES 77

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

FEB 1948

Subscription $2.50 per year.

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Phone Ax. 2-7965

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ORGANIZATION MEETING FOR THE WESTERN BRANCH OF THE AMERICAN MALACOLOGICAL UNION- APRIL 10-11

Out of town members wishing to make hotel reservations in Los Angeles are invited to write to Mrs. John Q. Burch, 4206 Halldale Ave., Los Angeles 37.

A more detailed outline of the program will appear in the March issue of these Minutes.

ANODONTA IMPURA (Say) FROM MEXICO

Marie E. Bourgeois

" Dear Mr. Burch: On re-reading some of your minutes, I notice on page 17 of No. 67, of the March Minutes for 1947, you say that: " Anodonta impura (Say), is an indefinite thing, with lost types; and type locality Mexico. What it is no one knows.- Hannibal's grouping and synonymy is definitely not acceptable; etc.". Of course, I know nothing of the lost types,(which I immagine should be in Philadelphia); nor, do I know where they were found; but that is the species, found here in Lake Xochimilco, in the Federal District. It is quite sought for food, so that it is more difficult to get good-sized specimens now, than formerly. My largest specimen is: length 90 mm,(which is decidedly larger than measurements given in the descriptions). Unfortunately, this specimen is badly broken, as the shell is so thin,that changes in the temperature cause it to crack and break.

Under separate cover, I am mailing you 4 specimens of this species; and 4 species of Sphaeriums, 3 of which are from Lake Xochimilco, and 1 from Lake Patzcuaro,Mich.,descriptions and illustrations of which species by Dr. H.A. Pilsbry, you will find on pages 785-788, and Plates 52,53 and 54 of Proceedings of the Academy of Natural Sciences of Philadelphia,;Dec. 1903.

Prof. Francisco Contreras was for a number of years,Director of The National Natural History Museum in Mexico City. He published, April,1930, a small paper on " The Moluscos del Lago de Xochimilco", in which he says Anodonta impura (Say), and Anodonta chalcoensis (Crosse and Fischer), are synonymous; and he also says that von Martens, and afterward, Pilsbry are also agreed that they are synonymous. I will enclose Say's original description in English of A. impura and Crosse and Fischer's Latin description of A. chalcoensis. They are probably right in this synonymy, as Lake Chalco, which has been drained, and now does not exist, and Lake Xochimilco, were connected, or, all one lake,formerly. If you have access to Crosse and Fisher's work, you will find these descriptions in Vol. II, pp. 522 and 536.

Say's Original Description of
Anodonta impura (Say), Vol. II, p. 536.

Sub-ovate,fragile,a little compressed, dull yellowish-brown; umbo much eroded, exhibiting a chalky white stratum, then, a dull, wax yellow surface; beak, a little undulated,hardly elevated above the general curvature,hinge margin forming a large angle at the base, being anteriorly elevated into an obtuse angle, whence the edge descends almost rectilinearly to the anterior margin, which is equally rounded with the posterior margin.

Length one inch & .3,(33mm); breadth less than two inches (50mm); convexity less than .7 inches,(17 mm). Inhabit MexicO.

(T. Say)

Anodonta chalcoensis, Crosse and Fischer,Vol.II,p.522

Testa inaequilatera,ovato-transversa,tumida,tenuis,epiderme olivacea vel fusco-nigrecente postice sublamellosa induta,haud radiata,concentrice,striatula,latere antico breve,arcuato; latere postico declivi,subrotundato; margine ventrali regulariter arcuato, haud sinuoso; margine dorsuali fere rectilineo, pone umbones oblique,ascendente; area compressa,extus non delimitata; umbonibus valde erosis; apicibus minutis, marginem dorsualem haud superantibus; pagina interna valvarum as peripheriam cooruleo-iridescens, ad centrum lutescens; cicatriculae musculares superficiales; ligamentum vix prorimulum.

Diam. antero post. 51 mm; diam. umbono-ventr. 30 mm
Altit. maj. 34 mm; crassit 21 mm
Habitat in Lacu Chalco,Provinciae Mexico dictee,Republicae Mexicanae (Brart,A. Sallé)

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Note- The shells sent by Miss Bourgeois arrived in good order and proved to be very interesting. The following comments are by the editor of our fresh water work, Dr. Wendell O. Gregg.

" The *Anodontas* above referred to are quite distinct from anything I have seen from California. They are more inflated than most forms of *californiensis* , and definitely more inflated than *oregonensis*. The ventral and dorsal margins are more nearly parallel than those of either *californiensis* or *oregonensis*. The dorsal wing is only slightly developed as in *oregonensis*. The posterior ridge is full and rounded, not double as in many specimens of *oregonensis*, and there is no suggestion of biangulation posteriorly." -Wendell O. Gregg.

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COLLECTING AT GUAYMAS,SONORA,MEXICO

By A. Sorensen

Dear John: Rose has asked me to write you a short account of what may be obtained here in the shell line and where it may be found. So, firstly I will tell where we are in order to make it sound more intelligent. Our postal address is Miramar Hotel,Guaymas,Sonora,Mexico. In a sense, that is a misnomer for Miramar Hotel is not in Guaymas, but is located on the shores of the beautiful Ensenado Bocochibempo, some four miles by road from Guaymas. Near the hotel is also located the larger and more pretentious, as well as more expensive, Hotel Playa del Cortez, originally built by the Southern Pacific Railroad of Mexico, but now owned and operated by a Chicago hotel chain. Paralleling Bocochibampo Bay is a mile long lagoon, where we all do much collecting when we do not wish to go farther afield. More *Melongena patula* are found here than at any other of our collecting places. They vary in size from the young one inch ones to the mature six inches or larger ones. The Mexicans call them " Burros" a name they also give to the large *Strombus galeatus* that are found among the rocks near Punta Colorado, at the eastern end of this bay. Both are used for food, and Mexican

picnic parties roast them over open fires when on outings.

The next largest mollusk in this lagoon is *Phyllonotus nigritus* (Philippi) which lives buried in sand until it finds a clam which it then braings up and eats. This it does by rasping a hole in the thin part of the clam shell where the two valves come together. The rasping is done with the many toothed tongue called the radula. When the opening is effected the body is sucked out and the shell discarded.

Some other molluscan predators have different ways of opening clams and small *Strombus*. The *Polinices* of which *P. recluziana* (Deshayes) and *Natica bifasciata* Gray are found here, secure their food by drilling a round hole in their victim and sucking them out, generally near the hinge in clams and near the apex in univalves.

In this and other lagoons we can gather clams for chowder literally by the bucket full. We get mostly *Chione succincta* (Valenciennes), *Chione undatella* (Sowerby), *Chione fluctifraga* (Sowerby), and a few *Chione gnidia* (Broderip and Sowerby.

Among the rocks outside the lagoons the *Protothaca grata* (Say) is the prevailing clam.

Among the different species found in the lagoon are *Anomalocardia subrugosa* (Sowerby), the beautiful little clam with alternate black and yellow stripes from the hinge down, and *Conus comptus* Gould and *Conus mahogani* Reeve. In previous years we took *Neosimnia quaylei* (Lowe) and *N. aequalis* (Sowerby) on white gorgonians in deeper water near the outlet. A considerable number of other species could also be named from the lagoon, but they are more numerous at other stations where we collect.

Among our most favored places are " Estero Soldado" ,some seven miles west of Miramar and " Puerto San Carlos" seven miles still west of that. San Ramon Bay southeast of Guaymas and " Cochore Beach" about eight miles south of Empalme railroad junction are also fertile fields.

As this is not a scientific diddertation I shall simply name species taken without giving authority for the name. In " San Carlos" are found: *Phyllonotus bicolor*, *P. nigritus*, *Strombus gracilior*, *S. granulatus*, *Turritella goniostoma*, *Terebra variegata*, *Oliva venulata*, *Agaronia testacea*, *Natica bifasciata*, *Polinices recluziana*, *Polinices uber*, *Natica marochiensis* , *Arca grandis*, *Dosinia ponderosa*, *Codakia distinguenda*, *Glans affinis californica*, *Cardium procerum*, *Cardium consors*, *Macrocallista squalida*, *Lima dehiscens*, *Pecten nodosus subnodosus*, *Ostrea chilensis*, *Pedalion chemnitzianum*, *Tellidora burnetti*, *Tellina cumingii*, *Tellina rubescens*, *Glycymeris maculata*, *Pinna maura*, *Pinna rugosa*, *Arca formosa*, *Arca pacifica*, *Donax punctatostriatus*, *Donax californica*, *Spondylus limbatus*, *Conus regularis*, *Chama frondosa mexicana*, *Pteria sterna*, *Anomia adamus*, and many more.

South of Empalme on the Cochore Beach we get *Pitar lupinaria*, *Petricola parallela* and *Petricola cognata*, and *Tivela byronensis*, *Conus fergusoni*, *Conus dalli*.

At Punta Colorado are found besides the large *Strombus galeatus*, *Fasciolaria princeps*, myriads of *Nerita scabricostata*

and *Neritina picta*, *Conus brunnea*, *Conus nux*, *Conus gladiator*, *Cypraea annettae*. *C. robertsi*. *C. albuginosa*, *Trivia solandri*. *Malea ringens*, *Cassis coarctatus*. *Semicassis centiquadrata*, *Ficus decussata*, *Cancellaria obesa*, *Cancellaria cassidiformis*. *Cancellaria brevis*, *Phyllonotus princeps*. *Murex elenensis*. *Astraea unguis*, *Turbo fluctuosus*. *Cerithium mazatlanica*, *Cerithium stercusmuscarum*, *Archetectonica grannulata*, *Heliacus radians*, *Thais biserialis*, *Thais kiosquiformis*. *T. patula*. *T. triangularis*. *T. rugosa*, *Acanthina angelica*. *Acanthina muricata*, *Acanthina tuberculata*. *Fusinus dupetithouarsi*, *Enaeta cumingii*, *Harpa crenata*, *Vasum caestum*. *Oliva incrassata*, *Olivella dama*.

Besides these there are various species of *Mitras*, *Nassas*, and others too numerous to mention, *Acmaeas*. *Crucibulums*, *Crepidulas*, *Dentaliums*. and *Chitons*.

Rose made a special find at Estero Soldado of a number of *Donax californica*.

Jim Bailey and Harlo Patton came here about a week ago. They are working early and late and they are finding good specimens by the wholesale. They and many others have confirmed my previous statement that this region is a conchologist's paradise.

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THE LATE EDWARD CARTER STEARNS, THOUGHT PROVOKER

By Dr. William Marcus Ingram

The writer believes that further data, giving the background for " Ye Forde-Smythe Feude" which was printed by John Q. Burch in the December 1947 Minutes of the Conchological Club of Southern California, might be of interest to the members. In the field of molluscan taxonomy where thought may be unusually intense and especially individually opinienated such poetry may indicate that species will come and go in minds as well as actually evolving and dissapearing.

We who are now engaged in working on invertebrates where synonymy has piled up over perhaps one hundred to one hundred and fifty years can't imagine, or can we, what will happen in taxonomy over the next five hundred years. I am carried to Leo George Hertlein and U.S. Grant's (1944) work on the Cenozoic Brachiopoda of Western North America, a splendid monograph. Here the synonymy listings of one species of brachipod, *Hemithiris psittacea* Gmelin, runs to fourteen names and includes references approximately covering four full pages of text. The general information about this species covers about one and three-quarters pages.

To return to Stearn's poem; it was sent to the writer, (as it was to Burch), who is interested in the Cypraeidae, by Mr. Allyn Smith of Berkeley who copied it, as written, from one of the late W.J. Raymond's note books. It was written by Stearns in 1894 and was sent to Ford at Philadelphia who in turn mailed a copy to Raymond at the University of California in the same year. The poem was stimulated from the tempest stirred up in Smith's mind from Ford's description of "*Cypraea gregori* Ford" in the Nautilus, Ford (1893). At least six issues

of the Nautilus were devoted to feudin and a fussin about this one " species", then silence. Ford (1893) (1893a) (1893b) (1894); Smith (1893) (1894).

Ford's first article (1893) described a variety,"Cypraea cruenta var. gregori Ford." Ford in a second article (1893a) elevated " gregori" to specific rank. In essence Smith (1893) (1894) said that Ford's " gregori" was in reality a Cypraea cruenta, but if Ford insisted in considering C. greegori a distinct species from C. cruenta, and not just a variety, it should be called Cypraea coloba, listed by Melvill several years earlier for the shell that Ford described as " greegori".

Who was right..... does time add to a solution of problems? Forty-six years later Schilder and Schilder (1939) lists the greegori of Ford in a genus Cribraria, a subgenus Talostolida, and consider it a subspecies of coloba; today then according to the above investigators Ford's species is Cribraria (Talostolida) coloba greegori Ford. Melvill's name coloba broached by Smith to Ford stands as Cribraria (Talostolida) coloba coloba Melvill. But in the meantime what has happened to the species Cypraea cruenta Gmelin ? Schilder and Schilder (1939) list a (?) cruenta Gmelin as Erronea (Erronea) ovum ovum Gmelin.

The species," cruenta", that Smith (1893) first accredited " greegori" to, as a variety, probably should now be called Cypraea chinensis Gmelin. The writer believes that greegori Ford is actually a synonym of coloba Melvill, and that coloba merely represents an individual varient of Cypraea chinensis Gmelin. Specimens of " greegori" that were in the possession of Ford at the time he proposed this term as a varietal name are now in the possession of the California Academy of Sciences and have been examined; they show no apparent difference from the coloba of Melvill which as stated above represents an individual varient of C. chinensis Melvill.

If Ford and Smith were here today what would their thoughts be now ? May I add that currently the few valuable daylight hours that I have free for research are being devoted to the natural history and collection of land and freshwater mollusks in the San Francisco Bay area.

(The poem discussed will be found in Minutes #75,pp 4 and 5)

BIBLIOGRAPHY

Ford,J.
1893. Description of a new form of Cypraea. The Nautilus 6:10, p. 112.
1893a. Description of a new species of Cypraea. Nautilus 7:4, pp 39-41.
1893b. Some responsive remarks relative to Cypraea greegori Ford. The Nautilus 7:7, pp. 78-81.
1894. Some final remarks relative to Cypraea greegori Ford. The Nautilus 7:11, pp. 130-131.
Hertlein, L.G. and U.S. Grant
1944. The Cenozoic brachiopoda of western North America. Pub. Univ. Calif. at Los Angeles in Math. and Phys. Sci., vol.3, pp. 1-236

(Con.)

Schilder, F.A. and M. Schilder
1939. Prodrome of a monograph on living Cypraeidae. Proc. Malac. Soc. 23:4, pp. 119-231.
Smith, E.A.
1893. Notes on Cypraea greegori Ford. The Nautilus 7:6, pp 64-65
1894. A reply to " Some (responsive) remarks relative to Cypraea greegori Ford", The Nautilus 7:9, p 102.

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SOME NEW PUBLICATIONS RECEIVED

Bulletin of the Southern California Academy of Sciences- Vol. XLVI, Part 2, May-August,1947. Issued Feb.5,1948.

Two papers in this issue are of particular interest to us. Description of a New Species of Trophon From the Gulf of California by Leo George Hertlein and A.M. Strong. The new species if Trophon (Boreotrophon) beebei Hertlein and Strong. The description of this species is very welcome because quite a number of us have had this shell in our cabinets for some time labelled Trophon sp. Of course, it is a rare species from deep water and quite distinct.

The other paper on mollusks in this issue is " A Contribution to the Natural History of Helminthoglypta Arosa ('Gld. Binney) and Helminthoglypta Nickliniana Awania (Bartsch)," by William Marcus Ingram.

The American Malacological Union- News Bulletin and Annual Report. 1947. Membership List Revised, December,1947.

Mrs. Robertson should be congratulated on this issue of a 32 page booklet. It is well done and largely a summary of the papers read at the 13th annual meeting held at Pacific Grove last year. The section " Shall We Have a West Coast Branch ?" is of particular interest to us with the opinions of most of the officers and council.

Catalogo De Los Moluscos De Cuba by C.G. Aguayo and M.L. Jaume. Pages 161-200 have been received. This " Check List" of Cuban mollusks is listing all species giving the reference to the original publication, occasional notes and some of the synonymy, and the distribution. It should certainly be in all conchological libraries.

The cost is $3.00 for 200 sheets, and the authors estimate that the work will exceed 1,000 sheets. Orders should be sent to Miguel L. Jaume, 13th Street, No. 351, Vedado,Habana,Cuba.

Revista De La Sociedad Malacologica " Carlos De La Torre" Vol.5, No.3, Dec. 31,1947. It is always a pleasure to receive the Revista. There is no publication on mollusks superior to it. In addition to the papers on Cuban mollusks by C.G. Aguayo, Augustin Nodal, and Oscar Alcalde Ledon in this issue the republication of " The West Indian Marine Shells" by Henry Krebs edited by W.J.Clench,C.G. Aguayo and R.D. Turner occupy some 26 pages.

Puget Sound Oyster Bulletin, Series VI; Number 13,- This issue is largely devoted to the spawning and setting of the oysters. An occasional reference to other species of mollusks is of some interest. For example in one locality where there was a high larval mortality it was suggested that it may have been due to large numbers of the larvae of gastropods such as the white bubble snail, *Haninoea vesicula* whose larvae are much larger and more active than the oyster larvae.

The publications of the Hawaiian Malacological Society- Honolulu, T. Hawaii. President and editor of their papers Charles A. Allen, 1094 S. King St., Honolulu 53, Hawaii. Among the papers of real value published to date by this society are the following: " Check List of Hawaiian Terebra"," Mitra in the Hawaiian Islands", " Hawaiian Cowries" Vol.1,No.7 (This paper includes figures of the species in color with a detailed description of each species), " Family Melanellidae(Eulimidae), Dec.1947 (including one very clear photographic plate), and descriptions of all species, " Hawaiian Tritons", The Family Cymatidae, and rather a remarkable paper on Conus. In this paper is printed the full descriptions of 5 new species of Conus by Paul Bartsch and Harald A. Rehder. *Conus eugrammatus*,*Conus hammatus*,*Conus spiceri*,*Conus smirna*, and *Conus halitropus*. The note is made " Figures of them have been made and will appear in the Monograph of the Hawaiian Gastropods which is in preparation". From what I hear the demand is certain to exceed the supply of these papers many times over. Those getting them will be fortunate.

Preliminary note on the occurance of Carychium tridentatum Risso in the Netherlands by Hans Schlesch- Basteria, vol.11, No.4,1947

Bulletin of the Natural History Museum, Balboa Park, San Diego, California- February,1948. Among other items of interest is this " Conchology Dept.: 14,898 specimens were catalogued, classified and added to the collection, making a total of 218,681 specimens now in study cases. Some 2,104 specimens were received by donation,47 of which were new to our collection."

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University of Southern California, Allan Hancock Foundation has been offering a series of Illustrated Lectures, Natural Science Series on the second Tuesday of each month. They are open to all students, faculty members, science societies and the general public. Room 145, Hancock Hall at 8 P.M.

These lectured started in November but three more are on the schedule- March 9 " Geologic History of the Channel Island Region of Southern California" by Thomas Clements, Hancock Professor of Geology; April 13 " Orchids of the World" featuring the Eugene O. Murman Hand-Colored Transparencies; May 11 " Symposium on the Ecology of the Grand Canyon Region" Panel: Norman C. Cooper, Floyd S. Durham, John S. Garth, Granville P. Ashcraft, Robert L. Rutherford.

News Items

Dr. G. Dallas Hanna of the California Academy of Sciences dropped in on the editor for a pleasant visit one day last week. And did he call at the right time, with the table literally covered with *Conus* from West Mexico. The long expected *Conus* paper is in the printers hands and we hope to see it soon.

Mr. and Mrs. W.P. Cook of San Diego gave us a surprise " We have sold our house and bought a trailer and will start for Florida about the 8th of Feb. when we have to vacate". We are certainly going to miss them but of course we wish them good collecting and happiness in Florida. We do not have the Florida address but assume that we will hear from them.

Dr. Charles E. Burt, 4010 West 21st St., Topeka, Kansas has for many years been interested in conchology. However, he most certainly goes far afield from the pursuit of mollusks doing business under the name Quivira Specialties Co. His current price list is almost startling - " Live Poisonous Snakes", " Live Lizards"," Live Turtles " Live Salamanders" etc.

Mr. Cedric E. Lindsay, Dept. of Fisheries, Ocean Park, Washington, " ... Your various publications are of definite interest to me although I am not doing much taxonomic work. I am now located close to Ilwaco, Washington where our winter work is being devoted to the management of some 9000 acres of State oyster land. We are at this time selling oysters from these State Oyster Reserves to help relieve the shortage of adult oysters for immediate marketing or fattening."

Paul H. Steele, 3487 Barhite St., Pasadena 8, Calif. We are happy to report that our good member was too tough to stay down long and has won the scrap with apendicitis and is back collecting shells.

Dr. Howard R. Hill and Mrs. Hill have just returned from a trip to Florida and Cuba with many interesting things to tell as well as many fine shells to show for the trip.

Mr. A.S. Koto and Miss Adele Koto, Marathon, Florida. " We will stay around here for a couple of months and then work other fields on the way home. Expect to get home about May 15th. ...Our best take so far has been live *Phasianella affinis* C.B. Adams and *Marginella catenata* Mont. These have not been common in past years but seem to be more abundant now. But we have to work for them by screening which our old friend Doc Bales used to say takes a strong back and weak mind. "

Robert J. Drake, Parrish Hotel, Great Bend, Kansas. Mr. Drakes permanent address is in Albuquerque, N.M. but he is now with the U.S. Engineers and is doing field work at the above address for some time. " Am getting in quite a bit of local collecting. Some of the smaller landshell forms are very familiar as I got them in New Mexico and Chihuahua."

H. Carroll McGowan, 603 N. Alisos Street, Santa Barbara, Calif. McGowan is not only an energetic shell collecter but has a fine collection of both minerals and wild flowers.

H.S. Mort, Mossman, N.S.W., Australia. We were very pleased to receive a nice Christmas message from our old friend. There are many fine shells about bearing his label.

R. Winckworth, Mahe, Seychelles- " Good wishes and Christmas greetings from the Seychelles. We have had good collecting here, and hope to return to England early in 1947. ". An interesting picture post card showing the beach at the capital city, Mahe.
Charles D. Nelson, Laredo, Texas. Nelson certainly picked the right time for his visit to Texas. He was there during the big storm in his Michigan home. " Very few snails and fresh water things here. I did find a Lampsilis not listed by Dr. Strecker and quite a few Eocene fossils of the Cook Mt. Formation."

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Mr. William Moore, a member of the Long Beach Shell Club passed away very suddenly at his home in Downey, Calif. on December 19th. The last pleasant visit I recall having with Mr. Moore was at the Baker's picnic shell party last July. He will be missed by his many shell collecting friends.

Mrs. Beatrice Koppen, formerly an active member of the Conchological Club died at her home in Van Nuys, California last October after a long illness. Mrs. Linkogel, her mother, said that she had mislaid her address book or she would have notified some member of the club sooner.

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Jim and Edna Marsh have both been quite ill with the Flu , or do we call it Virus X now. Everyone we know has had something to do with it.
Mr. James P. Conlin, 927 Tierney Road, Fort Worth 3, Texas. " I would like very much to contact some serious collector of Eocene and Cretaceous fossil shells. Do you know of anyone interested in exchanging such material ?
Miss Cecile F. Houghton, 113 Hillcroft Ave., Worcester 6, Mass. " Our club here connected with the Worcester Natural History Museum is an enthusiastic one although not large in numbers. It is called the Clench Conchological Club of Worcester named after Dr. William J. Clench of Harvard University. He is also a good friend to our club and our club leader Mr. Carl J. Erickson. Last monday evening we had an illustrated talk on shells by Mr. Percy A. Morris of the Peabody Museum of Yale University, who is also the author of the new book " Field Guide to the Shells" and of " What Shell is That". It was an excellent talk and we all thoroughly enjoyed it as well as outside friends. We have recently placed an exhibit of New England shells in one of the show cases of the museum. Four expeditions were taken by the club last summer either to collect shells or to visit private collections. Mr. Paul Steele was a former member of our club and is now living in Pasadena.... At the regular meetings of the club we identify shells in the museum collection ready for cataloguing as it has never been done, having been packed away for lack of space."
Mr. T. Pain, " Regency House", 71 Gower St., London, W.C.1, England." At the moment I am engaged on a revision of the Ampullaria(Pila) of Africa. I have already had much help from several of your countrymen in this connection, and am particularly grateful to Dr. J. Bequaert of Harvard College in this respect. Needless to say I should be very grateful to anyone who can let me

have shells of this genus from any part of the world. They are very difficult to obtain in this country at the moment."

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We have just been advised of the death of Professor T.D.A. Cockerell of Boulder,Colorado. Without a doubt there will be published accounts of his life work and the many published contributions to science over his name.

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CARL DAVIS HEGNER 1886-1948

We were all grieved and shocked at the unexpected passing of Mr. Hegner. He was an active and enthusiastic member of the Conchological Club of Southern California and he and Mrs.Hegner attended the last meeting before his death. At that time he seemed to be in good health.

Mr. Hegner was born in Milwaukee, Wisconsin, Dec. 28, 1886, but has been a resident of Los Angeles for the past forty four years, thirty eight of which were spent at the home address, 1904 Nolden St. He was display artist for the General Display Studio and a photographer of note. He is survived by his widow, Mrs. Carrie M. Hegner, a daughter, Mrs. Thomas Parker, a grandson, Thomas Parker Jr., his father, Mr. Wm. Hegner, and a brother Mr. Roy Hegner.

He was a member of the American Malacological Union, The Southwest Museum Club, and the Southern California Archeo--logical Club as well as the Conchological Club. Mr. Hegner had many hobbies in addition to his collection of shells. He was an enthusiastic collector of Indian relics, coins,stamps, and dolls.

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Mr. and Mrs. George Pattison, Glenelg, South Australia. We have a clever Christmas card from them shaped in the outline of Australia with pictures of the little Australian bears on the cover, kangaroos and birds on the inside. The 1948 program of the Conchology Club of South Australia causes one to regret the absence of a bridge or soemthing between us. It is rather an interesting arrangement they have over there. The Field Naturalists Section of the Royal Society of South Australia is divided into four clubs, one each for Botany, Conchology,Geology, and Zoology.

Mrs. Ida Worthy, Patumahoe, Auckland, New Zealand. A card and letter about a collecting trip to the south, also a new list of the membership of the Auckland Museum Conchology Club which is obviously growing since it lists quite a number of new mem--bers. The current mimeographed bulletin of the club also arrived- " A Trip to Mt. Maunganui" by Mr. J.R. Walker.

Mr. W.G. Paris, Boom, Tenn. We were glad to hear from Mr. Paris and learn that he is well and actively exchanging . He reported a number of exchanges with New Zealand,Australia etc.

Mr. Wm. G. Fargo is now at his winter home in Pass-a-Grille, Fla. and reports among other things some unusual mollusks from the stomach contents of bottom feeding fishes.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

January 5, 1948. Twenty seven members and guests were present when Mr. E.P. Chace opened our first meeting of 1948. The minutes of the December meeting were read and approved.

The chair appointed Mr. Morris Caruthers and Mrs. John Q. Burch to the membership committee, and Mrs. E.P. Chace and Mr. John Q. Burch to the nomenclature committee. The program committee will be Professor George Kanakoff, Mr. H. Arden Edwards, and Dr. Wendell O. Gregg.

All members were asked to assist with the meeting of the American Malacological Union.

The meeting was then turned over to our speaker, Mr. John G. Carlisle Jr. of the California State Fisheries Laboratories. He spoke on the problem of the Abalone.

He confined his remarks to the Red Abalone as that is of the most commercial importance. Restrictions to be effective must be based on the life cycle of any animal and little is known of the life cycle of the abalone. Efforts at artificiallly induced spawning have not been successful, eight days being the longest time eggs have been kept alive, at which time the almost microscopic animal swam furiously with the aid of tiny cilia and a minute shell had formed with a distinct flat spiral. A female abalone at one time lays about 2,000,000. bright green eggs. It is assumed they mature in about four years so that by the time the shell is 8 inches in size (about 10 to 12 years in age) the female has done her duty in propagation. The sex of the adult may be easily ascertained by lifting up the foot muscle along the outer edge of the shell and a long thin gland may be seen. The male gland is creamy yellow and in the female green.

How far the abalone migrates is not known. They seem to have a homing instinct and after feeding at night return to their own place on the rocks. They are vegetarians. Scratches on kelp and sea weed show where they have been feeding.

For the present the only restriction that seems feasible is the closing of an area for a number of years, then opening it and closing another. Their enemies include crabs and possibly starfish.

Mr. Herman Miller of Costa Rica told of being poisoned by the thread like hairs on Arcas.

Old members welcomed back Mrs. Linkogel who has been unable to attend for some time past. Respectfully submitted,

Hariette Gillis

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Notes from the Long Beach Shell Club

The newly elected officers are as follows: Mr. Harry Turver, President; Mr. Jim Bailey, Vice-president and program chairman; Mr. Ralph Bormann Sr., Secretary and Treasurer; Mrs. Irene Baker, Librarian; Mrs. Ralph Bormann, Historian.

A fine meeting was reported with an interesting talk by Mr. Robert Collyer, of the California Fish and Game, speaking on " Sport Fishing".

If the molluscan population of Guaymas, Mexico and vicinity fails to show a sudden decline it is another tribute to the prodigality of nature with her seed. So many different parties of collectors have visited that section this winter that it is probable that the following list is but a few of them.

Mr. A. Sorensen, Mrs. A.T. Whelchel, Mrs. John Q. Burch, Mr. and Mrs. John Strohbeen, Mr. and Mrs. Harry Turver, Mr. and Mrs. H. Arden Edwards, Mr. Arthur C. Price, Mr. Jim Baily and Mr. H. Patton, Mrs. Lila B. White, and others. All returned with fine collections and many tales of wonderful collecting and experiences. There is no doubt but that we will hear much more about them.

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Mr. Roy L. Morrison. 3745 Grim Ave., San Diego is now recovering from his illness. He was taken ill in Tuscon, Arizona on the return lap of a 10,000 mile vacation trip and spent 10 days in the hospital there and 10 days more in the hospital on his return to San Diego. They were away for 21 weeks. Mr. Morrison reports collecting land snails in Colorado, 6,000 Ft. altitude, fresh water shells from Kansas, Indiana, Ohio, Texas.

Mr. W. Thurgood, Hon. Curator and Librarian, Conchological Society of Great Britain and Ireland, Leeds City Museum, Park Row, Leeds 1, England. Mr. Thurgood now holds the position formerly held by Dr. Jackson at the Manchester Museum.

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California Fish and Game, Vol. 34, No.1, January, 1948 has just been received. The following data covering one quarter- July, August and September, 1947 may be of interest to some and should be a warning to many. The following arrests for violations of the game laws regulating the taking of the following mollusks.

Abalone- 133 arrests, $3,900.00 fines; Clams- 94 arrests, 12 jail sentences, and $3,461.00 fines; Cockles- 22 arrests, and $940 in fines; Scallops- 2 arrests and $20 fines.

And the seizures in those 3 months are little short of amazing. For example 6,175 pounds of clams and 7,995 pounds of cockles. Wonder where they found so many clams.

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Miss Marie E. Bourgeois, of Mexico City made a trip to the Atlantic coast of Mexico at Tuxpan, Ver. with some interesting experiences if comparatively few species of shells " While we were at Tuxpan, or really, La Barra Norte of Tuxpan, we had, after the first two or three days, norte after norte, as they call the wind and rain storms that hit the gulf. The water was very rough, (" muy enojado", as the Mexicans say) , still, it was not rough enough to bring up many live shells, as it sometimes does, when the wind is even stronger. As a reult, we were able to collect only 5 species, that were thrown up on the beach, alive; and none of these are at all rare. Still, believing that you might like to have specimens from this locality, I am sending you a few, under separate cover.

Restrictions on communications by mail in various parts of the world are at times rather interesting. For example the following:

Dr. Eduard Degner, Zoolog. Museum, (24a) Hamburg 36, Jungiusstr. 6, Germany. " My sincerest thanks for the surprising sending of your Minutes 72. The very interesting items permit a glance over the work done by the California conchologists in their world-wide relations. Books, papers etc. are allowed to be sent to Germany, but only from U.S.A. and the British Empire, not from other countries, not even from our direct neighbors, and we are practically cut off from scientific life...."

C.P.D. Verhaar, Westduinweg 2b, Scheveningen, Holland wishes to exchange Dutch shells for marine material from the coasts of America.

A.W. Arends, Graafscheweg 3, Numegen, Holland lost his entire collection during the war which included many exotics. He is eager to exchange Dutch shells for shells from other parts of the world. His special interest is the family Helicidae.

Dr. Alexander Comfort, 20 Honor Oak Road, London, S.E. 23, England. " Thank you for another issue of the Minutes. I find myself beginning to know some of the personalities in your club by name- there is a very great scope for informal scientific bulletins: they tend to make friends as well as collectors.

I have had some very profitable exchanges through your kind notice of my wants. I am going through as many transparent forms as possible with the spectroscope, and if any of your readers have specimens (even unlocalized junk) of Placuna, Avicula, Meleagrina, Vulsella, Umbrella, Aplustrum, Haminoea, and, particularly Cypraea mappa, I would be glad to have them. One great difficulty is that now one can no longer send currency to America, shells cannot be bought in England. Fulton, our last great dealer, is dead and his collection sold. Accordingly one has to rely on begging letters, exchange (I can offer a fair range of English land material, and am willing to collect specially if necessary), and personal collecting. I had a very good summer at Gairloch in Scotland, working with a kitchen strainer attached to a 20 ft. steel antenna from an army radio (the local sport is flounder spearing and the bottom is covered with valves of Cyprina and inhabited by large crabs the size of a portable typewriter, which make excellent eating for those who like crabs.)

I have been in touch with a number of German workers: if anyone feels like helping them out with food parcels I am sure Dr. Hans Schlesch could give addresses of European conchologists who are badly off for rations. I have so far not had any experience or exchange with Russian scientists, and cannot add anything to your note, but no doubt some of the destroyed Russian museums could use material. Dr. Adams of Belgium read a very interesting paper on the importation of S. European land forms into the Belgian sandhills, during the building of the West Wall, before the Malacological Society.

Dr. Hans Schlesch, Pernillevej 23, Bispebjerg, Kobenhavn NV, Denmark sent the editor a few names of German conchologists to receive assistance which has been attended to. He no doubt knows others.

NEW BOOKS

The following books are either recently published or are announced for delivery this spring.

Glaessner, Martin F. : Principles of micropaleontology. $6.00
An outline of the study of microscopic fossils, by a Russian-born petroleum geologist.

Murphy,Robert Cushman: Oceanic Birds of South America.
In 1936, the American Museum of Natural History published Dr. Murphy's two-volume work in a small printing which was soon exhausted. It has been in great demand and has been selling for large premiums over the original $25 selling price. The excellence of the work is indicated by the fact that among other scientific honors it has the Burroughs Medal of the John Burroughs Memorial Association, the Brewster Medal of the American Ornithologist's Union, and the Elliot Medal of the National Academy of sciences.
We are happy to announce a new printing of this great work. The two volumes contain 1245 pages, 16 color plates, 80 maps and charts, 72 pages of photographs.
It is announced for delivery in April this year.
Pre-publication price $16.00; After-pub. $17.50.

Jaeger, Ellsworth: Tracks and Trailcraft. There are hundreds of tracks described, and illustrated with clear pen-and-ink sketches: tracks made by our pets and domestic animals, tracks of field and forest, of zoo and jungle bird tracks, amphibian and reptile tracks and insect and mollusk tracks. Announced for May this spring. $3.95

Carr, William H.: Desert Parade $2.50 Describes the 4 different American deserts of the Southwest and devotes a chapter each to mammals,birds,reptiles,trees and shrubs, cacti and wildflowers. A fine series of photographs.

Wilson, Katherine: Golden Gate; the park of a thousand vistas. A description of the development of Golden Gate Park. $3.50

Lane,Ferdinand Cole: The Worlds Great Lakes. A collection of strange and curious information about the lakes of the world, their origin etc. $3.50

Peattie, Roderick: The Sierra Nevada; the Range of Light. The natural beauties etc. of the range that extends the length of California. $4.50

Raven, Charles E. : English Naturalists from Neckan to Ray
The lives and works of early British naturalists as illustrative of trends of speculative thought from medieval to modern times. $6.50

Reeve,Alan: Africa, I Presume ? An able artist and newspaper man made a 20,000 mile safari by air,road, and rail. It is an entertaining and amusing book. In Khartoum he visited insane murders in prison.. he saw the "stork people" of Malakal... $3.00

John Q. Burch, 4206 Halldale, Los Angeles 37.

John Q. Burch, 4206 Halldale Ave., Los Angeles 37, California will be pleased to have your order for any of the following books, and give the order prompt and personal attention.

Green, Roland: Wing Tips. The identification of birds in flight. A reliable guide to the distinctive features of different birds in the air and to the characteristics of different types of flight. 54 drawings, plates and beautiful wood cuts. $1.75

Von Hagen, Victor W.: Maya Explorer. The lost cities of Central America and Yucatan. $5.00

Northrop, F.S.C.: The logic of the sciences and the humanities. Papers and essays analyzing the scientific methods used in natural sciences, social sciences... 416 pp $6.00

Grabbe, Paul : Outdoors with the Camera 1948 $3.00

Weaver, Robert W. & Anthony F. Merrill: Camping Can Be Fun A readable book covering all supplies and how to act if you get lost, wet or bored. $3.00

Griscom, Ludlow and Edith V. Folger: The Birds of Nantucket A notable contribution to bird population studies. 17 pages of half-tone illustrations. Mid-March 1948. $4.00

Raymond, Percy E. : Prehistoric Life. A fascinating popular history of the five or six hundred million years before man appeared in the world. Feb. 1948 $5.00

Gates, R. Ruggles: Human Ancestry. The origin and history of the races of mankind, based on important new discoveries of human remains. Just published. $7.50

Curtis, George D.: Bee's Ways. For all nature lovers, bee-fanciers especially, of course. $2.75

Hausman, Leon A. : Beginners Bird Guide. March, 1948. $2.00

Hausman, Edith Hinckley: Beginners Guide to Wildflowers. $3.50

Asch, John: The Story of Plants. May, 1948. $5.00

Barnes, Howard: Your Boat: Its Selection and Care. A guide to the purchase and upkeep of every kind of sailing and power boat- copiously illustrated. Feb. 1948 $3.00

Mountaineers Inc.: Mountaineers Handbook. A guide to mountain climbing and ready reference for every kind of problem met in conquest of the peaks. May, 1948 $3.00

Fuller, Raymond T.: Nature Quests and Quixxes. A nature seekers handbook. March, 1948 $1.50

Weaver, Richard M.: Ideas Have Consequences $2.75

Askins, Major Charles: Wing and Trap Shooting. April. $2.49

Pickering, James Sayre: The Stars Are Yours. What are the stars? How far away are they? What are they called? What does man know about them ? May $3.95

Annabel, Russell: Hunting and Fishing in Alaska. $5.50

MacDowell, Syl: Western Trout April $4.00

Claflin, Bert: Muskie Fishing May $4.00

Zern, Ed: How to Tell Fish from Fishermen $2.50

Walden, Howard Talbott II: Anglers choice: an anthology of American trout fishing $3.75

Platt, Rutherford: Our Flowering World. The drama of the coming of plants and flowers to the earth. Beautifully illustrated in color. Now published. $6.00

MINUTES 78
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA
MARCH 1948

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,
John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Phone Ax. 2-79

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WEST AMERICAN STROMBUS

By Mrs. John Q. Burch

Genus *Strombus* Linnaeus,1758

We have four species to consider:

Strombus gracilior Sowerby,1825. (Lower Calif. to Ecuador)
Strombus granulatus Swainson,1822 (Gulf of Calif. to Peru)
Strombus galeatus Swainson,1822 (Gulf of Calif. to Panama)
Strombus peruvianus Swainson,1822 (Mazatlan, and Tres Marias Islands to Peru)

The distinguishing features of these four species are:

Strombus gracilior is the only one with a smooth body whorl. Length 3 inches.

Strombus granulatus is distinguished by the strongly tuberculate turrited spire. Length 3½ inches.

Strombus peruvianus is distinguished by the spirally ribbed depressed spire.

(Con.)

Both *Strombus peruvianus* and *Strombus granulatus* have spiral rows of nodes on the body whorl.

All three of the above have the shoulders of the whorls tuberculate, but

Strombus galeatus is easily distinguished from the other three by the fact that the shoulder of the whorls is smooth and not tuberculate.

The above distinctions become important when studying juvenile specimens. The adults are readily recognized.

Strombus gracilior Sowerby.

This species is of considerable interest to the paleontologist. The following is taken from an article by Charles W. Johnson, Nautilus 25: 109-110 " A large series of *Strombus pugilis* Linne, with its varieties *alatus* Gmelin and *nicauraguensis* Fluck, together with its Pacific analogue *Strombus gracilior* Sowerby, and their Oligocene precursors, *Strombus proximus* Sowerby and *Strombus pugiloides* Guppy, form a very interesting group for studying the evolution and variation of a species."

George Halcott Chadwick (Nautilus 13:77) in his attempt to place the species of *Strombus* in natural groups, of course, considered *Strombus gracilior* and its Atlantic analogue, *pugilis* Linne as a unit. In his definition of the group he comments that the last clause " inner lip spreading" is necessary to separate this group from the *Strombus luhuanus* Linne group of the Central Pacific. In all other respects they strangely parallel *luhuanus* although at first glance they may appear to be quite far apart.

This species is most abundant on sandy beaches in estuaries at low tide.

Strombus granulatus Swainson,1822.

In Minutes 75, page 2, the matter of the correct authority for this species was discussed by Dr. A. Myra Keen. Authors have attributed this species to Wood, Gray,Mawe and even Sowerby. However, the first description seems to have been made by Swainson,1822 (Appendix to the sale catalogue of Mrs. Bligh's shells, p. 8). Carpenter so attributes it in his 1872 Smithsonian reprint, p.6, and in the Mazatlan Catalogue, p. 382, but elsewhere cites various authorities.

Chadwick's efforts to divide the *Strombus* into natural groups resulted in placing *Strombus lentiginosus* from Japan and the Western Pacific, and *Strombus granulatus* in one group- his group B, but at the same time giving *granulatus* a place alone as a subgroup B2. It seems that *Strombus granulatus* is in many respects distinct from any other known species of *Strombus*. This species, which differs utterly from all other American forms, agrees closely in many respects with the *lentiginosus* group, and seems to form a geographically isolated section.

This species is not as abundant as *gracilior* but was taken at low tide on a sandy beach between two rocky points- not in the estuaries. My conclusion is that *granulatus* has a habitat in somewhat deeper water than that of *gracilior*.

Strombus peruvianus Swainson,1822 and Strombus galeatus Swainson

These two species fall naturally into the same group with Strombus gigas,gallus,costatus etc. and closer to Strombus samba.

Strombus peruvianus Swainson,1822.

Maxwell Smith in Panamic Shells, p. 20, gives the range from Acapulco southward, and Mr. A.M. Strong lists it from the Tres Marias Islands southward. However, Mr. C.R. Mahaffey in February,1947 took several good specimens at Mazatlan which is a substantial extension of the range northward.

Strombus galeatus Swainson,1822.

The Mexicans call this the " burro" shell. One collector referred to it as a " two ton Johnny" by which name it is affectionately known by the Guaymas collectors. These shells with the living animal in them weigh between 7 and 10 pounds.

This species is taken on the far side of Punta Colorado about 2 miles from Miramar Beach. If the collector is not using a boat it is necessary to hike which involves climbing the mountain with cat's claw and cacti along the way. The inclination is not to take too many " two ton Johnnies".

They are found off shore among the rocks under water at low tide.

Strombus As Food

I presume that all Strombus are edible but I can personally vouch for the tastiness of Strombus galeatus. We prepared them for eating as follows. After boiling sufficiently to remove the animal, we then prepared it as one would the foot of an abalone, but then put it through a food grinder rather than pounding- seasoned delicately with salt and pepper and mixed with eggs. It is then made into patties and dropped onto a hot griddle for quick frying.

Strombus gigas is a staple food in the British West Indies, and the commercial shell collectors were taking them away in such huge numbers that it caused a shortage of food for the natives. The result was that the British government passed a law forbidding the exportation of Strombus shells other than " cut" shells. By this is meant that it is the custom for the natives to cut a hole in the shell near the spire into which they insert a knife cutting the animal loose. Obviously these "cut" shells were not as desirable as specimens but countless numbers of them are now being offered by the Florida dealers.

The genus Strombus is characterized by great variation within the species, and many publications deal with this subject. One excellent paper is " Variations in Strombus Pugilis Alatus" by Calvin Goodrich, Occasional Papers of the Museum of Zoology, University of Michigan, Ann Arbor,Michigan. Insofar as I know there have been no such studies made of our west coast species although the variations are great indicating that there is still a great deal of work to be done on this group.

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A FEW REMARKS ON CLEANING SHELLS

By John Q. Burch

No attempt will be made here to discuss in detail the value of a study of the nuclear shell portion of a gastropod in generic classification. This has been treated in many publications written by authors more qualified. One paper frequently referred to in my library file on this subject is " Studies of Gastropoda,IV.- Value of the Protoconch and Early Conch Stages in the Classification of Gastropoda" by A.W. Grabau VII International Zoological Congress. The following is copied from this paper : " Relationship of protoconch and conch.- The protoconch forms the apical or nuclear portion of a gastropod shell, and is recognizable in the majority of well-preserved shells. Only in a few groups is it normally resorbed or habitually broken off during the later stages of development. In most forms it persists throughout the life of the animal, and is lost only through accidental wear or solution. That it is so often missing in recent shells is due to the carelessness of collectors or custodians to whom adult characters alone appeal. The wretched practice of "cleaning" shells with acid is also responsible for the destruction of the protoconch characters in most of the shells of some of our large collections."

The following remarks are not intended in any way to be a criticism of the host of aesthetic collectors whose interests are confined to the beauty of the object and who are concerned little or none with a serious study of the fine distinctions between them. Many of my closest personal friends and customers are listed in this group.

A few weeks ago a man called at my office with a large sample case full of shells, samples of items he wished to sell me. Perhaps I am easily amused but the gorgeous display he brought out gave me one of the heartiest laughs I have had in some time. Careful scrutiny would reveal that the object of brilliant cerise, sky blue, or royal purple had very likely been one of our common mollusks now dressed up in a Joseph's coat. I truthfully told my visitor that never in my life had I ever seen such a gorgeous display of shells, but begged him to please wait until after Easter to show them around to some of my friends or else there would be such a run on the stocks of dye that the Easter Bunny would of necessity have to be contented with white eggs this year.

This is no quarrel with the collector who buys muriatic acid by the gallon in which to soak his shells, but, of course, the immediate result of the acid is the complete obliteration of any possible fine sculpture on the shell as well as the protoconch. This makes it an impossibility to classify some species, and the beautiful glazed object is properly placed in the cabinet with the porcelain figurines, the ivory elephants and similar things. And it seems in order to touch it up if needed with a bit of dye or paint, but it is difficult to understand why anyone should wish a scientific name on such an object.

PUBLICATIONS RECEIVED

Johnsonia, Vol. 2, No. 25. " The Genus Truncatella in the Western Atlantic" by William J. Clench and Ruth D. Turner.

This paper is interesting to us in several respects. In the first place we in Minutes 56:7,8 decided that we were obliged to replace Truncatella by Acmea Hartmann,1821. The authors here use Truncatella citing our report in the synonymy and make the following statement " Acmea Hartmann 1821, Neue Alpina 1, p. 204-212. This use of Acmea was for a Truncatella but was published after his use of Acmea and Acme in Sturm's Deutschlands Fauna for a species which is not in the genus Truncatella."

An excellent and very interesting paper on this genus including a brief discussion of the close borderline between a marine form and a land form. Having dug our California species of Truncatella out of rocky rubble at least twenty feet above the highest high tide line we are able to appreciate the question. However, our experience has been to find it at all times in close proximity to the ocean which should make it a marine form if we are to attempt a clear distinction between land and marine gastropods.

Mollusca, Vol. 2, Number 2, February 7,1948. This issue is largely devoted to the reprinting of a splendid article first published in the Turtox News on " The Collection and Preparation of Shells. It is a fine paper and well worth rereading. And a short paper by our old member E.J. Post " Notes on the Genus Polygyra". Of course, since the publication of Dr. Pilsbry's great work most of us have been trying to remember to use Allogona townsendiana (Lea), Triodopsis devia (Gould), etc. but it is easily understandable that to most of us old collectors they will very likely be Polygyra until the end of our days.

A very beautiful booklet from the Tromso Museum, Norway 1872-1947 giving an account of its history and its present activities along with an outline of the present staff.

The Journal of Conchology, Vol. 22, No. 11, 31st Dec.,1937. This is the organ of the Conchological Society of Great Britain and Ireland, and it is to be expected that a large percentage of the papers deal with British mollusks. However, there are a number of papers of general interest. The paper by Bernard Verdcourt " The Speed of Land Mollusca" seems to be the first attempt to put a stop watch on a snail that has come to our attention. And the paper by J.R. le B. Tomlin " New South African Genus of Muricidae". The new genus is Afritrophon and from the very brief description one is disposed to wonder if perhaps some of our west coast species now tentatively placed in Trophonopsis and Boreotrophon may not also deserve a place of their own.

Fish Bulletin No. 67- The Commercial Fish Catch of California for the Years 1945 and 1946. The figures on the total catches of abalone,Pismo Clam, Octopus,Squid etc. are interesting.

David Nicol: The Genotype of the Isoarca (Class Pelecypoda) and Tropical American Species of Glycymeris from the Tertiary of California, and a New Species from Panama. Journal of Peleontology, Vol. 21, No. 4, July, 1947.

The Australian Museum Magazine, Dec. 31,1947 has one article " Left or Right Turn" by Joyce Allan. This is a populat article on the sinistral and dextral shells of the world.

Fisheries Newsletter- Published by the Dept. of Comm. & Agric. Australia. The issue for Februry,1948 has an account of the planting of Japanese seed oysters in Australia- by E.J. Ferguson Wood.

We are not sure to whom we are indebted for sending us a very interesting account of the return of the Wasmann and Schmidt Entomological Collections and Library to Maastricht,Holland.
It really had not occured to us that the museums of the countries occupied by the German armies during the war had in some cases been stripped of scientific specimens. We still refuse to believe that any of the German scientists had a hand in any such practice.

We have received a number of papers from Dr. Spot-Ryen of Tromso,Norway. While many of these papers are not recent they are new to our library and some of them deal with species from this coast and others deal with the arctic fauna involving species listed in our check lists. The papers follow: Faunistische Untersuchungen in Ramfjorde (in Norwegian), ; Notes on some Mollusca and Brachiopoda from Spitzbergen(in English); Studies on the Shell-Proportions of some Norwegian Mytilidae (in English and the method of measuring the variat-ions is interesting. A similar report on the Mytilus edulis of this coast would be worth while); The Norwegian North Polar Expedition with the " Maud" 1918-1925, Scientific Results Vol.V, No. 12. Pelecypoda, with a discussion of possible migrations of Arctic pelecypods in Tertiary times." (in English and of particular value and interest since this paper deals with species from the Bering Sea and involves many species taken far to the south along this coast); Pelecypods from Flor-eana (Sancta Maria) Galapagos Islands (in English and involves species familiar to all students of the fauna of this coast); Some Pelecypods from Franz Josef Land, Victoriaoya and Hopen (in English); Notes on Fishes from Alaska Collected by Ingv. L. Norberg (in English,1940).

We have received rather an extensive stack of publications of Dr. John Wagner, Hungarian National Museum. These papers are of interest to the editor of these minutes for several reasons. In the first place many of them are from periodicals heretofore not represented in our library causing a quite natural curiosity about other papers of interest in them. One example of these is " Rivista Di. Biologia Coloniale, published in Rome, another is " Folia Zoologica et Hydrobiologica" (Con.)

published in Riga, Latvia. There are several separates from publications in Italy, and another new file in our library is " Mitteilungen Aus Den Koniglichen Naturwissenschaftlichen Instituten" published in Sofia.

To list all of these papers here would fill the page, but the dates of publication are again of real interest reminding one of the fine publications from Belgium and other countries printed during the war and while under German occupation. We all recall the fact that virtually nothing was printed in our country during the war years and when the Smithsonian Institution or some other government agency did publish a pamphlet on some scientific subject not directly connected with the war effort it was attacked on the floors of Congress as being little short of treason. These publications came from Germany 1940-1944; Rome, 1940, 41, 42; Budapest 1940,41,42,43,44,45; etc.

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News Items From And About Collectors

Mr. Morris Schick, 715 So. Central Ave., Glendale 4, Calif.

" Mrs. Schick had been failing for the last five years and the last two years almost entirely helpless. So I had to give her most of my time, besides taking care of my small nursery business. Mrs. Schick could not go anywhere, and I could not leave her alone; could not even take a look at my shell collection. On February 10th she quietly passed away. I miss her very much and would gladly continue to work for her if I had her back, but that is not the right thought of life, so, I shall gladly carry on until my time comes too.

After getting many of my affairs straightened out will be able again to attend the meetings and get better acquainted with my shell collection."

Donald B. Cordry, Fray Angelico #30, Mixcoac, D.F., Mexico. We were shocked to hear from our friend Cordry who has been making great plans for a shell trip to Acapulco- " I had bad luck last week- Dorothy and I were about to start off to Acapulco for a month's collecting trip when I was bitten by a rabid dog so now it must be postponed while I take the two weeks series of injections- have started and feel very shaky..."

Dr. Joanne S. Schwengel writes that she had just seen Dr. Pilsbry off on a plane to Peru.

Malta Natural History Society, 80 St. John the Baptist St., Sliema, Malta, G.C. " Please accept our very best thanks ... We avail ourselves of this opportunity to send best wishes to you and to your society and to wish you most whole heartedly the very best and highest success."

Robert J. Drake is now with the U.S. Engineers temporarily stationed in Great Bend, Kansas and asks to get in touch with Kansas collectors. His comments on the weather as of Feb. 12 need not be rewritten but the main idea is that " weather- we have so much of it."

Walter J. Eyerdam, 7531 19th Ave., N.E., Seattle, Wash. "Recently I received two specimens of *Erininia zittalli* Boettger from the Berlin Zoological Museum. This makes three specimens in my possession of this exceedingly rare land shell with a heavy ring like Saturn. It is from the Lybian desert."

NOTE ON PLEUROTOMARIA

A number of correspondents of John Q. Burch will find the following note of particular interest having recently received beautiful specimens of this genus bearing the label Pleurotomaria hirasei Pilsbry. The following letter or rather excerpts from it will be of interest: a personal communication from Dr. Fritz Haas of the Chicago Natural History Museum. " Yesterday was a holiday, the Pleurotomaria arrived. Boy, was I excited, when I unpacked the little treasure! Well, the specimen arrived safely and I am very happy to have now a representative of the genus in our collection....

You wrote some time ago, that you did not know, if there were more than one species of recent Pleurotomarias. To this I can give the following information: there are 4 or 5 species (according to different authors), which even fall into different subgenera of Pleurotomaria. The specimen received from you is Pleurotomaria beyrichi Hilgendorf, the commoner, but still rare of the 2 Japanese species, and it belongs in the subgenus Mikadotrochus Lindholm 1927 of Pleurotomaria; of the second Japanese species, P. samiana Rolle, only one specimen is known, to the best of my knowledge."

In another letter received Feb. 14,1948 Dr. Haas states: " I want to comment on my assignment of your Japanese Pleurotomaria to beyrichi and not to hirasei. Subsequent authorities on the genus who had more ample material of Pl. hirasei than Pilsbry had had, found this species to be just a rather insignificant variation of beyrichi; so, if you want to, you can classify the form in question as Pl. beyrichi Hilgendorf var. hirasei Pilsbry.

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A number of correspondents were dissapointed when their orders for Frank Collins Baker: The Lymnaeidae of North and Middle America came in after the last copy had been mailed. I was under the impression that the work was ' out of print' but have been advised now that it is available from the Chicago Academy of Sciences at $5.00. Those wishing a new copy may write me and I will be happy to get it for you. John Q. Burch.

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An article in the Los Angeles Times of Feb.8,1948 is of interest: Doctor Honored for Sacrifice in Disease Fight- Cairo, Feb.8. (AP) - President Truman has awarded the Medal of Merit to Dr. Claude Barlow who sacrificed his own health to advance the study of Bilharzia diseqse. Barlow, whose home is Trumansville, N.Y., came to Egypt in 1929 at the request of the Rockefeller Foundation to do research on the disease, a bladder ailment caused by tiny parasites. Thousands of Egyptians are afflicted with the disease. It saps the strength and occasionally proves fatal. For 10 years Barlow poked about the canals and ponds of Egypt learning of the snails which are hosts to the Bilharzia parasite. During World War II he learned that American soldiers were returning home with the disease. Fearing its spread, the U.S. Public Health Service proposed research to find out whether any American snails might serve the parasite. Barlow suggested that an Egyptian sufferer go to America to assist in the studies. He was told this was impossible. He

(Con.)

decided to provide an infected American- himself- for the lengthy laboratory investigation. Twice the doctor exposed himself to the parasites to make certain of infection. By Christmas,1944, his condition had become grave. Because his value to science as a host to Bilharzia was great he refused to accept treatment until the spring of 1945. At that time, his formerly robust health shattered, he returned to Egypt, where he now is an expert in the Ministry of Health. At Washington, an official of the Public Health Service said that Dr. Barlow's work brought out new facts that made control of the disease much easier.

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Another newspaper clipping from the San Francisco Examiner might be of interest: Snails From China Will Aid in Disease Analysis- New York, Nov.8- Two bamboo vials containing snails have arrived in this country from China to be used in research for means of combatting schistosomiasis, a disease peculiar to some parts of China and contracted there by 1,500 American soldiers during the war. The snails, all of the schistosoma variety, were presented to Dr. Henry E. Meleney of the New York University Medical College by Dr. C.K. Chu, director of the Chinese National Institute of Health in Nanking. They were imported through the co-operation of the American Bureau for Medical Aid to China and the United States Public Health Service. Schistosomiasis is transmitted by parasitic worms that live in the snails, which breed in flooded rice paddies and slow moving streams. Persons working in those waters become infected. The worms deposit their eggs in the human intestines, liver and sometimes the brains, causing abscesses that lead to intestinal disturbances, cirrhosis of the liver and, at times, paralysis. No effective treatment for the disease in its advanced stages has been found, it was reported. Research is being carried out at New York University, where Dr. Meleney is professor of preventive medicine, and at Western Reserve and the University of Minnesota. Meanwhile, in China, the Institute of Endemic Diseases has been set up in Soochow to carry out a program of research and field control work.

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Dr. T. Soot-Ryen, Tromso Museum, Tromso,Norway. " ... and the Minutes of your club. It has been a great pleasure to me to go through all the valuable information regarding the mollusca of the west coast and I have got a lot of ideas also regarding our own fauna. Unfortunately I have not had time for the mollusca till now. Our museum was taken by the Germans during the war and we had to evacuate all our collections. After the war I have been busy with the reevacuation and restoration of the buildings and with the arangement of our 75 year jubilee.... I am now trying to work out a collection of pelecypods from the Antarctic and from Tristan da Cunha and I hope to be able to finish the work this winter. Then I should like to compare a larger material of fossil and recent pelecypods stated as occuring both on the West-coast of America and in the Northern European waters. Do you think that it will be possible to obtain some material through your club as loan or in exchange ? ... From our corresponding member Mr. Ingv. L. Norberg, Seattle, we have been presented several lots of highly interesting shells from Alaska.. I hope it will be possible to visit your country in 1949 and will do my utmost to visit you.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

The February meeting of the Conchological Club of Southern California was called to order by the president Mr. E.P Chace. The minutes of the January meeting were read and approved. The following new members were received- Mr. and Mrs. Wm. Church, Miss Bessie Falconer, Richard Linsley, Leonard Bessom Jr. and Robert Grau.

E.J. Post sent specimens of Geodes from Tampa,Florida which were distributed among the members.

The club was shocked by the sudden death of one of our members, Mr. Carl Hegner. Sympathy was expressed and flowers sent to Mrs. Hegner, who sent a card of thanks to the club.

There being no committee reports the business meeting was c closed and Mr. Turver took charge of the program. Among the many items of interest he gave on our personally conducted auto trip to Guaymas and collecting there are the following. Inspection at the border does not begin until 9 A.M. after which it is too late to make Guaymas in one day, but there are good motels in Nogales and Magdalena. The tides are rather a law unto themselves, remember the difference in time (Mt. time) and so allow two hours and then you may be off. The people are reserved,curious but all courteous. The language is no barrier- Population of Guaymas about 17,000- Great variation of shells found only a short distance apart. Best collecting about three miles from town. Living costs slightly higher than here and nice cottages with cooking facilities are obtainable. If you wish to get through the inspection quickly coming into California don't clean all of your shells. Mr. Turver sketched a map on the blackboard and we were able to visualize lagoons, mangrove swamps, lava rocks and San Carlos Bay where Limas tantalize one with the flash of their orange mantle. All of us who have not been to Guaymas are determined to go sometime. Respectfully submitted. Harriette Gillis.

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Rev. Elwood B. Hunter, First Presbyterian Church, Sitka, Alaska. " Your fine Directory came just a few days ago... I visited your home when I went to Mexico with Andy Sorensen and the Turvers and Strohbeens. That was an interesting trip and I certainly enjoyed it. If you ever come to Alaska, be sure to look us up. There are many things of interest here but my time is so limited that I seldom get a chance to do much. I have dredged a few specimens however as well as shore collecting ..."

Mrs. Harold R. Robertson, 136 Buffum St., Buffalo 10, N.Y. We were sorry indeed to hear of Mr. Robertson's illness, but glad to hear that he is a little stronger now.

Mr. A.M. Strong has not been in good health but we are happy to report that he is greatly improved. He is spending most of his time at the address in Balboa, 320½ Amade but comes into his Los Angeles office two or three days a week.

Dr. G. Wellmann, Berlin-Charlottenburg, Mommsenstr 22,Germany. We were pleased to have a letter and a large separate of 115 pages , a very exhaustive study of Margaritana margaritifera L.

J.L. Staid,123 Rue Clovis, Rheims, Marne, France. Mr. Staid has a great deal of interesting material for exchange. If the editor could promote a little more assistance from members perhaps he could find the time to do some exchanging.

March 7,1948

The western members of the American Malacological Union are meeting April 10th and 11th in Los Angeles. This meeting is being called by the president, Dr. A. Myra Keen at the request of members to discuss the formation of a western branch. An all day meeting will be held Saturday,April 10th beginning at 10 A.M. at the Hancock Foundation, University of Southern Calif.

There will be a 7 o'clock dinner meeting at the Figueroa Hotel,939 S. Figueroa, $2 per plate, reservations paid in advance.

An all day meeting will be held Sunday, April 11th at the Los Angeles County Museum beginning at 10 A.M. A $1 luncheon will be served at the museum with reservations paid in advance.

Registration both mornings will be between 9:30 and 10 A.M. There will be a small regristration fee.

Papers of interest to all malacologists will be prepared and given by outstanding members.

The Figueroa Hotel, while not in the heart of the city is not far from the shopping district and pleasant rooms may be reserved upon payment of one night's rate. Single without bath $2; double without bath $2.50; single with bath $2.50,$3,$3.50; double with bath $3,$3.50,$4; and $4.50 with twin beds and bath.

Those planning to attend any of the sessions or wish hotel reservations are asked to notify Mrs. John Q. Burch at the above address or telephone.

MINUTES 79
APRIL 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum,Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

Publications sent in exchange for these papers or for review or discussion should be sent direct to the editor. Otherwise they are occasionally not received nor noted in these Minutes.

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MEETING OF THE WESTERN MEMBERS OF THE AMERICAN MALACOLOGICAL UNION April 10 and 11,1948

This was an organization meeting to discuss the formation of a western division which was done subject to the approval of the council of the A.M.U. at the fall meeting. The following officers were elected:

Chairman: Miss Ruth E. Coats
Vice-chirman: John Q. Burch
Secretary: Dr. L.G. Hertlein

The following registered for the meeting:

Alexander, Mr. and Mrs. Robert R.- 4645 4th St.,La Mesa, Calif.
Taylor, D. Dwight- 1955 Mendocino Lane, Altadena,Calif.
Taylor, Dwight W.: " "

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Harrington, George L.+ 566 Washington Ave.,Palo Alto,Calif.
Price, Arthur C.- 2618 Wellington Rd., Los Angeles, Calif.
Rex, Edith R.- 417 Redondo Ave., Long Beach 8, Calif.
Coats, Ruth E.- 702 E. 1st St.,Tillamook,Oregon
Keen, Mrs. Ernest B.- Stanford University, Calif.
Keen, Dr. A. Myra- " "
Shumate, Agnes J.- 1433 6th St., Apt.F,Santa Monica, Calif.
Chace, Mr. and Mrs. E.P.- 24205 Eshelman Ave., Lomita, Calif.
Howard, Dr. A.D.- 2307 W. 20th St., Los Angeles, Calif.
Emerson, Wm. K.- Hancock Foundation, Los Angeles 7, Calif.
Gregg, Dr. W.O.- 2200 S. Harvard, Los Angeles 7, Calif.
Burch, Mr. and Mrs. John Q.- 4206 Halldale Ave., Los Angeles 37
Clark, Mrs. Effie- P.O. Box 511, Yuba City, Calif.
Fletcher, Mr. and Mrs. H.L.- 908 Crescent Ave."B",Redlands,Calif.
Turver, Mr. and Mrs. H.R.- South Gate, Calif.
Strong, A.M.- 320 Anade St.,Balboa, Calif.
Smith, Allyn G.- 722 Santa Barbara Rd., Berkeley,Calif.
Morrison, Roy L.- 3745 Grim Ave., San Diego,Calif.
Berry, Dr. S. Stillman- 1145 W. Highland Ave.,Redlands,Calif.
Whelchel, Mrs. A.T.- 303 Abby St.,Fresno 3, Calif.
Sorensen, A.- 247 Granite St.,Pacific Grove, Calif.
Wilcox, Ernest N.- 1738 Johnson Ave., San Luis Obispo,Calif.
Hamilton,Edwin L.- Bldg. 315, Apt. 14,Stanford Village,Calif.
Dowdle, John M.- 2030 Temple St., Los Angeles 26, Calif.
McCulloch, Dr. Irene- Allan Hancock Foundation, Los Angeles, Calif.
Heller, Albert- 1868 Rodeo Rd., Los Angeles, Calif.
Baker, Mr. and Mrs. E.P.- Downey, Calif.
Edwards, Mr. and Mrs. H. Arden- Southwest Museum, Los Angeles,Calif.
Hegner, Carrie M.- 1904 Nolden St., Los Angeles 41, Calif.
Ulrich, Mr. and Mrs. E.W.- 1049 Island, Wilmington, Calif.
Patten, Mr. and Mrs. H.H.- Los Angeles, Calif.
Bormann, Mr. and Mrs. Ralph- 4331 Vermont St.,Long Beach 14, Calif.
Heard, Mrs. Lillie- 4210 Halldale Ave., Los Angeles 37, Calif.
Clark, Donovan L.- 606 Gayley Ave., Los Angeles 24, Calif.
Stilwell, Grace D.- 337 Cedar Ave., Long Beach, Calif.
Higgins, Lena- 2224 Orange Ave., Long Beach,Calif.
Falconer, Bessie- 236 Bailey St., Los Angeles 33, Calif.
Bailey, Mr. and Mrs. Jim- Inglewood, Calif.

The papers read will be reviewed later.

Program

April 10,1948 Hancock Foundation, University of Southern Calif.
10 A.M.- Business meeting called to order by Dr. A. Myra Keen
Luncheon
1:30 P.M. Material collected by the Hancock Foundation
by Dr.Irene McCulloch
Argonauta by Dr. S. Stillman Berry
Distribution of the muricid subfamily Typhinae
by Dr. A. Myra Keen
7 P.M. Dinner at the Clark Hotel, 426 S. Hill St.
Toastmaster- John Q. Burch

Sunday, April 11 Los Angeles County Museum
10 A.M. Studies in the gastropod family Cancellariidae
by Jay Marks
Pictures of trip to Mexico,1948 by Mr. H.H. Patten (con.)

Atascadero fossil deposit
by Mr. Ernest Wilcox
Luncheon
Review of Vol. II, Part 2 Land Mollusca of North America,Pilsbry
by Allyn G. Smith
The holotype of Murex petri Dall
by Dr. S. Stillman Berry
Some introduced mollusks living in San Francisco Bay
by Dr. A. Myra Keen

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A CLAM DIGGING EXCURSION TO COPALIS BEACH,WASHINGTON

by Walter J. Eyerdam

On March 12th,1948 my brother Eugene and I in one car and Prof. Kincaid and his wife in another went to Copalis Beach, Gray's Harbor Co., Washington. Professor Kincaid then went to Willapa Harbor where he has an oyster bed and his son Tom runs an oyster cannery.

My brother and I had conceived the idea of earning a few dollars at razor clam digging during the brief open season in March. We rented a nice cabin on the beach for three weeks,bought two of the peculiar long, narrow bladed, curved, short handled shovels adapted only for the digging of *Siliqua patula*; also a couple of game licenses. We took along all of the necessary equipment for this work including a lot more that we didn't need.

We thought we would soon become adept at digging razor clams but after working four low tides without success, while the professional clam diggers were doing quite well we decided that we were too dumb to catch these wily clams although in ordinary clam digging in Puget Sound we both believe that we are A 1. Most of the professional diggers at the ocean beaches have had long experience and seem to have a natural instinct for spotting the obscure ring in the sand even when the surf is running hard. A peculiar deft thrust with the clam gun on the lee side of the clam and a quick grab nearly up to the elbow in the sand and water generally produced a clam for an expert but nor for us.

It is a hard job digging these surf razor clams but successful diggers seem to enjoy it. They work both tides and even when the season is closed one is allowed 24 clams per day. In rough weather it is of course impossible to dig clams. Most of the diggers that I met were Okies and Arkies besides the native born people. Between times they work in the canneries or work in the woods.

During War II the beaches were closed to clam digging by the military for 4 years. For two years after the beaches were opened the diggers made very good money in a short time but now the beds are depleted again to such and extent that only professional diggers can make a living at it.

My brother and I had expected to become efficient enough in a few more days and had intended to stay until about April 1st but on the third day I had an accident which caused us to return to Seattle.

After one of the tides I spent the rest of the morning collecting botanical specimens near the seashore in a swamp. While trying to collect a rare fern with the clam shovel from a spruce tree I inadvertantly stepped on a long sharp rusty nail in a board which went nearly through my foot. Not daring to take chances on getting lock jaw I returned to our cabin and we packed

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up right away and went home. So, at least we called it a nice vacation and I did bring home a lot of interesting plants and some shells.

With two low tides I walked over to a stretch of sand beach covered with several acres of rocks and boulders. Here we collected a couple dozen species of shells. On the great sandy beach itself there is only the razor clam Siliqua patula nuttallii and nothing else. This animal finds its nourishment in siphoning fine sand covered with two special kinds of diatoms. It seems that the only enemy the razor clam has is man. Not even a seagull or a heron is able to catch one of these wily clams and they have no molluscan ebemies of any kind and apparently no parasites. There are no starfishes.

The following list are marone shells from Copalis Beach

1. Siliqua patula nuttallii Conrad - only on sand beach at low tide- common.
2. Schizothaerus nuttallii Conrad- extreme low tide beyond rocks scarce
3. Protothaca staminea (Conrad)- among rocks- scarce
4. Saxidomus nuttallii Deshayes- very scarce
5. Zirphaea gabbi Tryon- very scarce- in clay rocks
6. Clinocardium nuttallii Conrad- very scarce
7. Macoma carlottensis Whiteaves- not common-extreme low tide line beyond rocks.
8. Macoma balthica Linne- one specimen
9. Ostrea gigas Thunberg- not common
10. Tellina bodegensis Hinds - valves washed up on shore
11. Entodesma saxicola Baird- One specimen
12. Petricola carditoides Conrad- living on top of boulder
13. Botula californiensis Philippi- common under rocks in tide pool
14. Mytilus edulis L.- on rocks- not common
15. Mytilus californianus Conrad- very common
16. Bankia setacea Tryon- in hemlock log
17. Acmaea digitalis Eschscholtz- on rocks and Mytilus
18. Acmaea pelta Eschscholtz- on rocks - not common
19. Acmaea fenestrata Reeve- on rocks- not common
20. Diodora aspera Eschscholtz- one specimen
21. Thais lamellosa Gmelin- on outer rocks
22. Thais emarginata Deshayes- on rocks
23. Thais emarginata ostrina Gould- on Mytilus californianus
24. Littorina scutulata Gould- on M. californianus and rocks
25. Polinices lewisii Gould- one specimen
26. Alectrion perpinguis Hinds- common in sand among rocks
27. Puncturella cucullata Gould- one specimen
28. Haplotrema sportella- juvenile- one specimen
29. Vespericola columbiana Lea- juvenile- two specimens

* Note- no chitons were found.

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Walter J. Eyerdam, 7531 19th Ave., N.E., Seattle 5, Wash.
" Received your letter and kind invitation to be your house guest at the coming convention of the western division of the A.M.U. I have looked forward to this meeting and thought sure I would be able to make it but now it develops that the herring fishing company that I expect to work for in Alaska, the " San Juan Fish and Packing Co." will send their crew north about April 10th..." Anyway our friend Eyerdam is again in Alaska- no doubt collecting in every spare hour.

PUBLICATIONS RECEIVED

Leaflets in Malacology, Vol.1, No.4, Feb. 20,1948 Two Misunderstood West American Chitons by S. Stillman Berry.

This well written paper will cause those of us who dislike changing labels some discomfort. Most of us have many sets of shells labelled both dentiens (Gould) and raymondi (Pilsbry). After examining the holotype in the U.S.N.M. Dr. Berry has placed raymondi in the synonymy of dentiens and assigned this name to the northern shell and has described Lepidochitona keepiana n. sp. for our common southern California species.

Snails of the Sierra Ancha,Arizona by S. Stillman Berry, The American Midland Naturalist, Vol.39, No.1, pp. 151-159,Jan.,1948.

Two new species, Sonorella strongiana and S. anchana are very carefully described and figured in this paper. The photographic figures are excellent as well as the drawings of the anatomical features.

On Opalia montereyensis (Dall)- by S. Stillman Berry (From the Journ. of Entomology and Zoology, Vol.40, No.1,1948)

Again this paper will cause a great many changes in the labels. Of course, Mr. A.M. Strong, Allyn Smith and others have suggested the possibility that Opalia evicta (de Boury) might be in the synonymy of O. montereyensis (Dall),1907. This was discussed at length in our Minutes #52, p. 17 giving all of our collecting records under the name evicta. The Burches found this very abundant in our dredgings off Redondo Beach, Catalina Island, ald elsewhere off the coast and many of our correspondents now have sets of these shells labelled Opalia evicta (de Boury). These labels should be changed to read Opalia montereyensis (Dall).

Pacific Discovery published by the California Academy of Sciences, San Francisco, Calif. Vol.1, No.1, Jan.-Feb. 1948. This is the really beautiful new magazine of the California Academy. This initial issue is to be congratulated on the excellence of the photographic plates.

The growth of the Calif. Acad. is indicated by the fact that two pages were required in the March Academy News Letter to list in double column the applications for membership.

The Nautilus, Vol. 61, No.3, January,1948- While our West Coast authors are conspicuously missing the Nautilus is always of interest.

Bringing in the Trochus in the Palau Islands by Julia Gardner reminds me of an incident several monts ago. A cable came in offering me 200 tons per month of Trochus niloticus. The sender obviously thought that all persons interested in shells must own factories. Half of one ton would very likely supply the shell collections of the known world.

Dr. R. Tucker Abbott of the U.S. Natl. Museum has another paper on the Philippine freshwater. Charles B. Wurtz has written a fine paper describing a new species on the land shells of West Virginia. John Dyas Parker of the Philadelphia Academy has a paper on the Cassis and other mollusks of the Chipola Formation. Professor E.A. Andrews paper on the Achatina achatina is timely with this genus so much discussed.Glenn Webb has a fine paper on

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his specialty of recent years- the mating of vcertain Triodopsinae. James N. Ross of Michigan has a short paper on Zoogenetes harpa.
However, under Notes and News we find two papers by West Coast students. Hertlein and Strong " Note on West American species of Condylocardia". " Iolina, New Name for Iolaea A. Adams 1860" by Joshua L. Baily Jr. We used the name Iolaea A. Adams as a subgenus of Odostomia. Dr. Baily points out that in his opinion this is preoccupies by Iolea Pascoe 1858.

Australian Cone Shells by Bernard C. Cotton, Publication No.5 of the Field Naturalists Section of the Royal Society of South Australia Conchology Club. 48 species are figured in this paper and the figures are excellent. A check list of the Conus is included. The price is two shillings and sixpence. Jan. 1948

Living and Fossil Pupillidae of the Sanborn Area,Northwestern Kansas (Trans. Kansas Acad. Sci. 9: 407-419,1947). by Dorothea S. Franzen and A. Byron Leonard. 100 pages and 6 plates. In this paper 7 species and subspecies now extinct in this area have been found in the Pleistocene deposits. 6 species now living were not found in the Pleistocene. 3 species were common to both.

Charles T. Simpson's Types in the Molluscan Genus Liguus, by Frederick M. Bayer, Smithsonian Miscellaneous Collections Vol. 107, No. 16. 8 pages and 1 plate in color. This is a valuable piece of work for the students of the Florida Liguus.
This brings to mind one of the find dreams of many of us West Coast collectors. Many authors and Dr. W.H. Dall in particul--ar described a host of species from this coast without figures and at times at least to most of us very inadequate descriptions. We have been attempting to classify many of our species from these descriptions until some of us almost know some of them from memory at least the confusing parts of them. The editor will be happy to send anyone interested a list of species never figured with sets so labelled all along the coast most of them bearing a ?. A few of these descriptions contain obvious impossibilities and just what the species may be nobody knows until the holotype is seen.

Chicago Natural History Museum Bulletin for April 1948 has an account of the equipment of the ship Caryn for the Bermuda Deep-Sea Expedition, a joint project of the Chicago Natural History Museum and the Bermuda biological Station for Research. The museum's Guatemala Zoological Expedition,1948 will leave on April 8 for four and one half months in the field. The Palau Entomological Expedition which entered the field last October has transferred its activities from Palau to Panope, the largest of the Caroline Islands in the central Pacific.

Report of the Committee on a Treatise on Marine Ecology and Palaeontology. 1946-1947 No.7, March,1948- Dr. Harry S. Ladd, Chairman and Kenneth E. Lohman, Vice-Chairman. This report in 93 pages contains many interesting papers. " Annotated Biblio--graphy of Paleontology of California Tertiary Marine Mollusks" by Dr. Wendell P. Woodring of the U.S. Geological Survey. " Annotated Bibliography of Brachiopod Paleontology" by G.A. Cooper of the U.S. Natl. Museum. " Bibliography of the Ecology

(con.)

of the Foraminifera" by Earl H. Myers, Research Associate in Paleontology, University of California. Many interesting items regarding the activities of some we know to be interested in malacology. An example is the note about Professor Robert W. Hiatt, of the University of Hawaii spending a month on the island of Yap in which subtidal areas were explored by diving and thousands of invertebrates taken to be compared with material from the Philippines, Indo-China and the Great Barrier Reef.

The first unit of the new Marine Laboratory, University of Texas has been opened on Mustang Island, Port Arkansas,Texas.

Prof. Ralph W. Dexter of Kent State University, Ohio is undertaking an ecological study of the barnacles under the direction of Dr. J. Paul Visscher.

Professor Thos. A. Stephenson of the University of Wales in Aberystwith has been awarded a fellowship from the Penrose Fund of the American Philosophical Society to study the general biology of animals and seaweeds between tide marks in American environments on both east and west coasts. Prof. Stephenson will be assisted in his studies by Mrs. Stephenson.

At Woods Hole Oceanographic Institution, C.J. Fish is completing the compilation under Navy contract of a bibliographic card index of approximately 8,000 titles pertinent to Pacific Ocean biology. Dr. Gordon Riley is organizing available data for quantative analyses of plankton in the western North Pacific.

?? We are greatly interested in the two large papers now on our desk because they are the first we have received from Japan since the war. One contains 15 pages of plates and the other 10 pages of plates. The photographic figures are clear and well done, and of course, the standard Latin nomenclature in the keys to the plates makes them usable and valuable. However, all data pertaining to the author,date etc. is in the Japanese language and while we have among our immediate associates those able to read most of the languages of the world we are still in need of one who reads Japanese.

The Effect of Change of Environment on Lymnaea Peregra (Muller) (from The Microscope, Nov.-Dec.,1947) by Bernard Verdcourt of Luton Beds,England and the following interesting papers by the same author have been received.
" An Introduction to the Study of Radulae"- " Further Notes on Radulae"- " The Radulae of the British Non-Marine Mollusca-I"- Same II,III,IV and V. These papers should by all means be read by all of our members interested in radulae.
" The Microscopical Investigation of the Food of Snails"

An article in the Times of April 8,1948 - Los Angeles- is of interest- " Pests in Returned War Surplus Posing Problem"- With the return of over 1,000,000 tons of material from the Pacific islands many mollusks are included as well as countless insects etc. The following is from the Los Angeles Times " Yesterdays 1000 ton cargo, arriving on the Alamo Victory, came from Saipan . Giant African snails found in crates and on pipe and other articles ..." Several score of Achatina fulica.." The snails which eat almost everything and which are classified as major pests in South Pacific Island areas , are bisexual and any two

(con.)

can propagate. In addition they are capable of living without food or water for periods of two to three months or longer. Inspectors found nearly 50 of the huge snails yesterday and were maintaining a close watch on the shipment which will be fumigated, completely unpacked, cleaned and repacked etc."

Science News Letter, Dec. 20,1947 had a cover picture of a large Tridacna with the reference to the article " Atom Explosion Does Not Affect Life on Bikini". " A Navy expedition to Bikini last summer found little change in the life of the island. Semmingly ignoring man's destructive weapon, the atom bamb, the giant man-killing clam on this week's cover of the Science News Letter is growing on Bikini reef...."

Nature Lore, March 1948, published monthly by the Agassiz Nature Club of Long Beach.

News Items

The Valero IV was to have been launched at San Diego on April 11. This is the new vessel of the Hancock Foundation of the University of Southern California and will be completely equipped for deep water dredging and scientific investigations.

Quensell Displays Inc., 71-23 Austin St., Forest Hills, New York are manufacturers among other items of some ticket holders molded of clear plastic. These are being used by a number of shell collectors and are attractive for beauty collections. Package of 50 sells for $9.00, 100 for $15.00.

Dr. F.G. Walton Smith, director of the Marine Laboratory, University of Miami, Coral Gables 34, Florida advised us about their work in a personal letter of March 12.

" The Marine Laboratory is primarily a research institution but the scientific staff co-operates with the teaching departments of the University by giving both undergraduate and graduate courses in the fields of oceanography, marine biology and fisheries biology. Graduate students may be given the opportunity of taking part in various research projects as part of their training.

An important part of our activities is concerned with the development and management of fisheries in Florida and the West Indies. We are under contract for work of this nature with the state of Florida and with several of the West Indian governments. In addition to this the Laboratory carries out work for industrial organizations in the development of marine products and in investigating such problems as the affect of industrial pollution upon fish,oysters and other marine life. We are also under contract to the United States Navy in the study of tropical deterioration and have carried out a number of investigations upon submarine corrosion and ship bottom fouling.

Along with applied science we endeavor to maintain a program of fundamental investigation into the ecological conditions and the biological and oceanographical problems of the tropical seas. We have recently completed an investigation of the " red tide" phenomena of an enormous plankton bloom in the Gulf of Mexico. We are also studying the inter relation of chemical, physical and biological conditions of the water adjacent to Miami. As a necessary

(con.)

adjunct to the various phases of our work we maintain a museum of Florida and West Indian marine plants and animals for the purpose of research and reference. This is being continually enlarged and will we hope eventually become an important regional center for the West Indies and Caribbean region.

Our staff consists of Dr. Robert H. Williams, Assistant Director, who is a marine botanist, Dr. Charles C. Davis, a specialist in plankton, Mr. Craig A. Gathman, Fisheries Biologist, Dr. Ernest S. Reynolds, Micro-biologist and Dr. Luis R. Rivas, Ichthylogist. In addition we have graduate assistants working in the various specialized fields, particularly in faunistic and taxonomic work.

The Laboratory was first organized by myself in December 1942 and since then a considerable part of out work has been in the field covering investigations in different parts of the Caribbean, the Bahamas, the Gulf of Mexico and the Florida Keys. Partly because of this I must confess that our physical plant is inadequate. We are hoping, however, to build a permanent building at the cost of $150,000 some time during the present year. A suitable site has already been secured and part of the funds are already available."

Professor Louis Brand, University of Cincinnati, Cincinnati 21, Ohio. " ...Next year I shall be in Hawaii as a visiting professor. I shall drive out in August and sail from San Francisco."

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

March meeting

Mr. E.P. Chace called the March meeting of the Conchological Club to order. There were 19 members present. The minutes of the February meeting were read and approved. A new paper by Dr. Berry was called to our attention.

From new papers and other publications we were told of the splendid scientific work done in Europe in the midst of the war years. Reference was made to work done in Belgium, Roumania and Hungary. In this connecyion a most interesting letter and appeal for specimens came from Dr. Edward Degner, Hamburg Zoological Museum. Members signified a desire to assist and Mr. Kanakoff was asked to take charge of the project so there would be no duplication.

Mr. E.P. Chace showed the exhibit of Terebratalia with the blue ribbon it won at the St. Petersburg, Florida shell club exhibition. He showed the red ribbon won by the Long Beach club with an exhibit also arranged by Mr. Chace.

Mr. John Q. Burch, the able editor of the Minutes told us the 77th number had just been sent out and asked for relief or assistance in getting it out. After asking the members to do some constructive thinking on the matter the subject was tabled.

The malacological meetings will be held April 10th and 11th with dinner Saturday evening at the Clark Hotel.

The business session was closed and Mrs. Rose Burch spoke on the subject " West Coast Strombus" with specimens to illustrate her remarks. She told interesting facts about them and their distinguising features. While at Guaymas they found S. galeatus very good eating. The method being to prepare the foot as for abalone steak but grind the meat instead of pounding it. Make into patties and fry quickly in a very hot pan. By eating them their reputations were saved, for the people down there eat the animal

(con.)

peculiar Americans throw away the meat and save the shell. She felt the " Two Ton Johnnies" were rightly named for by the time you dive for a few and carry them up the cliff and around cacti their 6 to 8 pounds feels like a ton. Some of us learned for the first time the reason for the hole cut in the shoulder of S. gigas. It is a food staple in the West Indies and the animal is removed by means of making a hole in the shell and the law prohibits shells without holes being sent away. Respectfully submitted,

Harriette Gillis

April Meeting

The president, E.P. Chace, called the April meeting of the Conchological Club to order, there being 30 members present including three new members. Miss Ruth E. Coats of Tillamook,Ore. Wm. Emerson and Albert Heller. Mr. Schick was welcomed back after a long absence. The minutes of the March meeting weree read and approved. There were no prepared reports from committees. Mrs. Burch told of the change in place of the malacological groups banquet to the Clark Hotel. Our ' Honorable President' asserted Mr. Burch should be so called for assistance in getting out the Minutes, active assistance being better than constructive thinking. Mr. Chace was asked to have a paper on chitons for the May meeting. Mr. Kanakoff had prepared a list of West Coast mollusks to facilitate the project of sending shells to the Hamburg Museum. The subject of having a club librarian was laid on the table. The meeting was turned over to Dr. H.R. Hill, the speaker of the evening. Dr. Hill prefaced his remarks by showing us one of the rarest cowries- the Spotted Cowry (Cypraea guttata) now in the museum in a specially prepared case with mirrors,. He told us that a marine came to his office, showed him the shell, saying that he and another marine while on Manus Island in the Admiralty Group were buying cowries from the natives for 10 and 15 cents, he noted that one was different from any of the others so kept it and when the opportunity came brought it up to Dr. Hill. He said " You dont remember me do you ? I worked in your office years ago." Dr. Hill vividly pictured to us his trip to Florida and Cuba. From the antelope in Texas to the cattle standing in water in Florida; the damage from two hurricanes in the fall to windrows of debris cast up by the storms which yielded 25 varieties of sponges all nicely cleaned by nature. He and Mrs. Hill enjoyed the motor trip to Key West and while in Florida visited aquariums and saw many old and new shell collecting friends. The Theatre of the Sea was one of the most interesting places being an old stone quarry with pits filled with ocean water and many types of fish were to be seen. He saw bales of sea fans for sale for $1.20. In Cuba they enjoyed the hospitality of many friends including Dr. Carlos de la Torre, who presented Dr. Hill with a case containing all 48 varieties of Polymita, a beautiful and valuable collection. They enjoyed seeing the Univ. of Havana Museum, the Casino and many points of interest. One place, after hunting land shells the host had them all cleaned by the time they left. On the return trip he fished at Marco, and found quantities of shells on Coconut Id., one of the Thousand Islands. In New Orleans he saw pictures made entirely from gar fish scales. They must have had a wonderful trip and we enjoyed the travelogue.

Respectfully submittes, Harriette Gillis.

Minutes of the Conchological Club of Southern California-
Number 6- December,1941.

We have been asked many time for copies of the insignificant card we used in December,1941. The war had just started, Pearl H Harbor, you recall and the only thing we had in mind was whether or not we should continue to function during the war. Perhaps that month of December should not have been counted but we had an idea of numbering the minutes by the months,

Therefore those having the following pages of the first issues of our Minutes have a complete file:
July, August and September,1941 came out in 3 pages- 1 page was printed on both sides and was devoted entirely to the actual minutes of those three meetings. The next page started off " All members are urged to be present at the meeting to be held Tuesday, Oct.7..." We called this one paper numbers 1,2, and 3.

#4 of the Minutes was composed of two pages , one printed on both sides. The first page was the actual minutes of the October, 1941 meeting and started off " Called to order by the president, Tom Burch, ... at the usual time and place, Oct.7,1941.." The second or rather the third page of #4 was " Notes on Non-Marine Mollusks of Southern California" by Dr. W.O. Gregg.

#5 of the Minutes was also composed of three pages- 2 sheets one printed on both sides. The first page was devoted to the actual minutes of the meeting of Nov.4 and started " The Conch. Club of Southern Calif.. met at the usual place at the Los Angeles Museum, Nov.4,1941..." . The third sheet was devoted to a paper " California Eremariontas-Genus Micrarionta" by George Willett.

#6- was actually omitted but counted in our numbering arrange--ment should have been the minuted of the December meeting. We did not meet in Dec. 1941 but consulted one another regarding the possibility of disbanding for the duration of the war. The museum was immediately closed to us also.

#7- The minutes of the meeting of Jan.6 which was held at the home of Mr. and Mrs. George Willett.

#8- The minutes of the meeting of Feb.2,1942 held at the home of Mr. and Mrs. John Q. Burch.

#9- March,1942 #10- April,1942 #11- May5,1942

#12- June,1942 was numbered and all subsequent issues.

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Mr. and Mrs. E.P. Baker, Downey, Calif. " Friend John- Irene and I had a very interesting trip last Sat. to White's Point, in company with Mr. and Mrs. Hood of the Audubon Society, to collect and photograph sea life. Arrived at about 11 A.N. new time, and whilst Hood's collected material for background, we looked for sea life which has photographic possibilities. With an eye open for cowries, we looked for serpont starsm octopi etc. Soon found we had company on the beach. Dr. Holward Hill's junior group had come over from Cabrillo Beach and Mrs. Linsey and son Dick were also along as were Dr. and Mrs. Hill. As is nearly always the case when hunting for some specific specimen you find something else, so it was then. But we took what we found, All told we collected some 30 Norrisia norrisii, two fine groups to study; an extra large Kellettia kellettii, 2 Cypraea spadicea, a growth group of Ischnochiton conspicuous, and two nudibranchs, not rare but seldom seen- Hermissenda crassicornis and Navanax inermis. Of the later in a miniature tide pool, we made several fine photos; that is Mr. Hood did whilst I steadied the tripod and kept cool water runn-

(con.)

-ing into said tide pool. We wanted the Cypraea with their mantles expanded, but they had other ideas. We had brought along some fine Murex festivus, a growth study, which were photographed with appropriate background. "

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The newspapers have all of them had lurid accounts of the invasion of the local beaches all along the coast by what they report are millions of jellyfish etc. Portuguese men-of-war. The water was turned blue over 100 yards out to sea by the animals.

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Wayne T. Montgomery, P.O. Box 236, Buena Vista Station,Miami,Fla.
We have recently received a list of fine species of Florida L Liguus which Mr. Montgomery has for sale.

C.L. Blakeslee, Pittsford, N.Y. " It will soon be time to start collecting in this clime. What I want of more shells I do not know. I must have at least 20,000 but not of different species. Yet there is always a chance of picking up something rare or uncommon. Two years ago while out doing a little collecting I passed by an insignificant transient snow pool in a piece of waste land and at first thought it too small to hold a frog. Thought better of it after getting a ways down the road and went back, skimmed out some small Fossarias and later they were identified by the Smithsonian as *Fossaria dalli* F.C. Baker. Previously I had found a few fossil ones in some marl about two miles distant from this site. How these got into a small, snow pool without any connection with another pond or stream is beyond me. This is, so far as I know, the only record east of the Ohio. Baker lost it there. Last year I visited the same pool twice a week until it eva½orated as the hot months came on and not a *dalli*. Twenty five miles twice a week. Eight weeks. Nice little jaunt for fun .

While in Buffalo some years ago I made two trips of forty miles each to a site where I knew I could find some *Vallonia pulchella* Muller. A little later on I idly explored the vacant lot next door to me and found a nice lot of them under old pieces of boards and paper."

Robert J. Drake, Albuquerque, N.M. " ...Plans are rapidly progressing for several months shell collecting in several of the northern Mexico states. Will try to get to Mexico City too. While on the University of New Mexico Department of Anthropology archaeological expedition to southeastern Chihuahua deserts last August I was able to collect about 100 lots of nonmarines. Have a new species of *Oreohelix* (*Radiocentrum*) in the bunch. I think it will prove to be the southernmost record for the genus.

Heard from Maxwell Smith the other day. He is planning another trip below the border and we may be able to collect together if plans work out.

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Headquarters, United States Army, Alaska, Office of the Special Services Officerm APO 942, c/o Postmaster, Seattle, Wash.

Special Services, Hq. U.S. Army,Alaska, desires to purchase shells for shellcraft for use in hobby shops at Army and Air Force installations in Alaska. ..."

[illegible]

The [illegible]

[illegible]

[illegible]

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MINUTES 80
MAY-JUNE 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,
John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Phone Ax. 2-7965

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The following note received from Mr. E.P. Chace:
" A package recently received from Mr. Robert Talmadge of Eureka contained 2 specimens that he collected on the bar in the Eel River at Stephens Grove, Humboldt Co., Calif. They seem to be Helminthoglypta nickliniana and closest to var. anchoreta (W.G. Binney). This is quite a long extension of range northward for this species. The most northern record in the Manual is a few miles north of Clear Lake. The record reads " Mendocino Co. north of Blue Lakes (Smith). Blue Lakes are in Lake Co. I believe, but the county line is only a few miles north of the lakes, according to the map that I have."

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Edward F. Ricketts, internationally known biologist and co-author of Between the Tides with Jack Calvin was fatally injured on May 8 when his automobile was struck by a train along Monterey's famed Cannery Row. Mr. Ricketts colaborated with John Steinbeck in writing " the Sea of Cortez".

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Long Beach Shell Club has published the annual program schedule and a roster of the members. A number of outstanding speakers will appear on their programs for which they should be congratulated

R. Winckworth, 71 Whitworth Road, London S.E. 25, England has returned from his trip to the Seychelles Islands.

Professor Louis Brand, University of Cincinnati will spend the next year in Hawaii as an exchange professor.

E.J. Post, 8420 Tampa St.,Tampa,Florida. Note the change in address. " I would have written sooner but I wanted to find out more definitely about the Goniobasis. I sent some to Dr. Pilsbry to get his opinion of them, but he is still in Peru, A.A. and wont be back till the middle of next month. About two weeks ago I went to Lithia Springs. It is 3 miles from where my son lives on a bee line, but it is 9 miles by the road. It is impossible to get to it in the rainy season as it is all under water. There is not a house within a mile of it and this is the first time I was ever there. It is a fine spring, pure water and crystal clear. I found Goniobasis there by the million. I don't know whether they are calenaria or posti. I am sending some to you. I think they are a little smaller and I don't believe they are posti full grown. I put in one dead one which is the right size. The main difference in the two is that posti has a very sharp apex. .."

L.B. Howsley,Brookings,Oregon. We have had some very interesting letters from Mr. Howsley from which the following are a few excerpts.: " While in Alaska, I had several interesting talks with " Jack" Calvin, who runs a stationary store in Sitka. He is co-author with Ricketts in the " Between Pacific Tides". This area (and the Boehm Canal and Ketchikan) is the most prolific in Thais I have ever encountered, especially T. hormica & lamellosa the latter in beautifully sculptured and colored types. I gathered a large quantity of both of these while there.

While on the Bering Sea, my time was well taken up with ornithological duties amongst others, and I did not do much beach coombing. At Hooper Bay, I did pick up a few mollusks but all were common.

At Juneau, Mr. Edward Keitham, Curator of the Territorial Museum,has some interesting shells from the Bering which were from the stomachs of walrus. These are highly polished and quite often are found on the beaches where the walrus have ejected them after absorbing the contents. They are all bivalves. If you have none and wish a " historical" novelty to add to your cabinet you might effect a trade with him. Incidentally I placed a series of local mollusks in a cabinet they provided for me.

At Barrow, there are very few shells in comparison with areas farther south, but a wonderful meeting place for Arctic breeders. The navy now controls the area almost to the mouth of the Mackenzie..."

John Dyas Parker, Academy of Natural Sciences of Philadelphia. "...Things around the Academy are all in a turmoil for the last few weeks and I will try to give you a blow by blow account.

Last February Dr. Pilsbry was racing against time trying to get his Land Shells of N.A. north of Mexico completed. As you know the work has been going on for the past 10 years and then some. The first three sections (vol.1, parts 1 and 2, part1) have already been distributed and the time was drawing near for publication date on the last section. Everyone was working like beavers for the Dr. had one part in press, one part in proof, one part in the editor's hands and one part in manuscript. Every day was now a fight to get rid of the section being worked on

(con.)

and get the next section from some one else. Finally the last of the material passed through the Dr.'s hands a scant couple of hours before the Dr's plane left for Peru. In the meantime the presses have finally ground out the last of the Pilsbry Monograph and it is in the process of distribution. The whole set makes the finest work on land shells to date, bar none.

On arrival in Peru Dr. Pilsbry did a week's marine collecting while marking time for Dr. Francis Pennell, our botanist who joined him a week later. Together they, with a group of Peruvian scientists and Weyrauch, the German collector, went over the hump of the Andes and had a wonderful time collecting in the Upper Amazon drainage. Leaving the rest of the party there he went back across the Mts. and up toward the Ecuadorian border where he met Olsson who took Pilsbry to visit Miocene and Eocene localities, He has sent home a lengthy letter in which he enumerated many of the species taken in this arid area. Finally he went back to the coast where he again collected marines. He expressed joy at getting out of the desert with its fierce heat.

Wurtz no sooner helped get the Dr. on his way than he too started packing up. We put in another feverish week packing the mollusk equipment for the Catherwood-Chaplin Expedition to the Caribbean Sea. Besides Chuck Wurtz of the Mollusk Dept. there are Jim Bond, Birds; George (Swampy) Proctor, botany; Leroy Saxe, parasitology; Charles C.G. Chaplin, photographer; Evelyn Legge, writer; Baron Jack Von Ripper, artist; and last but not least Cummins Catherwood, leader of the Expedition and Drayton Cochran, master of the schooner Vigilant. The itinerary called for several stops including Cay Largo, Cuba; Old Providence and Swan Islands, the Mosquito Islands in Nicaragua and the fringes of low islands off the Margaritas and Venezuela. However, everything that can happen has delayed the trip and at last reports the vessel was back in Habana Harbor. The 110 foot schooner had been so severely battered rounding the Cape Hatteras that it had to put into Palm Beach for major repairs, When these had been effected and the journey resumed, a freak out of season storm and 60 mile per hour gale forced the ship to take refuge in Cat Cay. Here they struck an uncharted coral head and were hung up on the reef for a time. Later, after refloating they went to Havana and a new keel was put on the boat. The Harvard Botanical Gardens were visited while the ship was being repaired and some flora and fauna of the area was collected. Key Largo was reached and collection parties went ashore. At this point one of the crew died and the boat again had to return to Havana to get everything straightened out. At least this itinerary is what we can make out from the fragmentary news derived from a series of post cards.

At present I am alone in the department and have taken advantage of the situation to renew alcohol on the wet specimens. This is a distasteful and never ending job as you probably know. Miss Harbison is banging away on the St. Petersburg, Florida fossils that she and Fargo are preparing for publication. I find this an interesting field and am doing the bookeeping on this collection. She is a splendid worker and I enjoy working with her..

I was down at the National Show again this year and brought a nice display from the Academy. Movies and color stills showing how to collect, classify and prepare shells was the theme of the display. U.S.N.M. had a fine display of growth stages of Carditas

and also a nice display of Xenophoras of various species. Greatly admired were the Brachiopods sent in by your local collectors of the Long Beach Shell Club. Collectors from all over were on hand and they had a huge display of shells,many of which were worth a great deal. We took time out too for a social whorl or two,among which was the party thrown by Mr. and Mrs. Locklin. Among those present were Captain and Miss Haas of the Edart Museum, Judy Hodgins of the Beale-Maltbie Museum, Jay Webber, Maxwell Smith Jack Schmidt, William Fargo, and many others. I am pleased to say too that the display made such a good financial showing that its future, for next year at least, is assured.

Thanks a lot for the picture of yourself. I have also received several others from your neck of the woods but I am still trying to get more photos of folks out in California. How about passing the word around among your friends."

" I have been tied up lately as my wife just had a second daughter, Carolyn, on April 15th. Plenty of work at home now."

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Rev. W.H. Fluck 1870-1948. Rev. Fluck died at his home in Brattleboro,Vermont on April 17th,1948. He was 78 and well known as a conchologist. He discovered a number of new species and several were named for him. He left a collection of several thousand species.

His friend, Mr. Edmund Everett Hobbs Sr. sent us a brief outline of his life. Rev. Fluck studied for the ministry at the Moravian College, at Bethlehem,Pennsylvania. After his ordination he remained for a time near Bethlehem as a Moravian minister. Later he was sent to Nicaragua, Central America, as a Moravian Church missionary. Later he was sent to Jamaica to serve as a missionary. Then he served as minister at Cliffty Creek,Indiana ; Delanco,Delaware; Utica,N.Y. In his spare time the Rev. Fluck was always an ardent collector of marine,freshwater and also land shells. There are quite a number of shells in the Burch collection collected by the Rev. Fluck in Jamaica and Nicaragua.

Rev. Fluck is survived by his widow, Mrs. W.H. Fluck, 80 Oak Grove Road, Brattleboro,Vermont from whom we have an announcement of his death.

Mr. Hobbs writes of a number of interesting collecting trips made in the company of Rev. Fluck. Mr. Hobbs mentioned having observed in a small stream in Binghamton,N.Y. several instances of *Galba catascopium* having secual contacts with *Physa gyrina*. He then writes " A few years ago (when Rev. Fluck and I were making a collecting trip together to Oneida Lake), I told my friend,Rev. Fluck about this personal observation of mine. Then I asked him if perhaps that might account for some of the hybrids or apparent mutations among the *Acmaea*, *Thais* and other groups of marine snails" Rev. Fluck remarked that that reminded him of a talk he had some years back with Dr. Bryant Walker who had made similar observations.

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Robert J. Drake - writing from Jiminez, Chihuahua,Mexico " Got to northern Mexico as planned. For ten days I was the guest of the faculty and students of a boy's high school at Salaices,Chihuahua, Got in much collecting there and had much assistance from the teachers and students of the school.

No living *Humboldtiana*,*Holospira*, or *Bulimulus* were to be found. When I was there last August(1947) they were swarming (con.)

all over the place. Fortunately, I got a lot of these three genera last year with the bodies.

I previously wrote you about the Oreohelix (Radiocentraum) my archeologist friend picked up someplace in the vicinity of Salaices. I could not find it this time. And, I looked plenty for it. It should be living now someplace in the vicinity. I may stop at the school on my way back to Albuquerque and have another look. There is still one principal sierra I was'nt able to get to, and it may be found there.

Within several days I go to Durango City,Durango. There should be more of the Mexican Plateau biota to be found there. Here in southern Chihuahua, the bionome is mostly Southwestern with a bit of Texan thrown in. Plenty of Helisoma,Physa,Gyraulus,Stag-nicola, Pisidium,Musculium,Lymnaea,Pupillidae, Vallonia,Hawaii, and Succinea to be found now. The rivers are very low. The rainy season is in August and September. I am along, travelling by train and bus and hitchhiking. ..."

Dr. Charles R. Wright, Sanger, California. " I haven't been south since I saw you folks at Asilomar last year. My work on shells has diminished almost to the vanishing point, as I have been giving most of my time to work with the Boy Scouts here in Sanger. However, I have taken the Scouts on a fossil hunt to Coalinga,Kettleman Hills, and Tar Canyon back of Avenal."

Wayne T. Montgomery, P.O. Box 236 Buena Vista Station,Miami,Fla. has been sending out some very interesting price lists of rare Liguus. Those interested in this group should communicate with him.

Harold Harry, R 2 Box 222, Shreveport, Louisiana. " ...I shall be in Shreveport and vicinity for most of June,.. You may note that most of the stuff I am ordering is about biology of the Mollusca. I seem to be getting farther and farther away from the systematic side, except where it is necessary for exact identification. So much of the foreign work is on biology rather than straight systematics (not that systematics is not a part of biology) that I sort of hope you get more of the foreign reprints. You aren's just holding them back, are you..?

About the last week of June I leave for Ann Arbor , where, fates being willing, I shall be for awhile , with Dr. van der Schalie. So after July 1 my address will be Museum of Zoology, University of Michigan, Ann Arbor.

Just got back from a two week trip to Yucatan, where I did mostly land snails. The trip was intended to study the problem of bird migrations, and Mr. Lowry was doing observations on the moon. It is part of the Lowry-Williams debate about trans-gulf or circum-gulf migrations; as yet, our data on birds has not been fully analized."

Thomas L. McGinty, Boynton Beach, Florida. " We had a nice visit with the Cooks a few weeks ago. They are really getting around and now are on the way north, Canada I believe. Wish that more of the west coast gang would include Florida in their itinerary.

We drove over to St. Petersburg a few weeks ago to see Fargo and Locklin. They are both doing a whale of a job on our Florida fossils. Mr. Fargo was just leaving for Jackson and the Locklins should be in Detroit by now. The work that they are doing will be a big help to all those interested in Florida and West Indian shells."

M. Woodbridge Williams- News Letter- Calif. Academy of Sciences " The Steinhart Aquarium has a new Junior Aquatic Biologist replacing William B. Richardson, Aquatic Biologist, who recently

resigned to go into business. The new biologist, who is also a photographer, is M. Woodbridge Williams, A.B. ,Pomona College, formerly of Berkeley-- " Woody" to his associates in the Academy . After his discharge from the U.S. Army, Woody took a sailing jaunt down the coast of Baja California, studying and photographing marine life, and came to the Academy direct froma a year of advanced oceanographic work, specializing in marine invertebrates at the Scripps Institution of Oceanography, La Jolla. At the Aquar-ium Woody Williams will devote himself largely to the exhibits of exotic freshwater fishes."

Dr. Henry van der Schalie, Ann Arbor. We are happy to have a photo of the entire family, Mr. and Mrs. van der Schalie and the three children. A note from Mrs. van der Schalie tells of some of the affairs of the latest addition to the family. " The pink and blue fish will soon be kept busy, in the bathtub and out, at the rate our newest little son is progressing. He doesn't hold things yet, nor has he discovered that hands can reach, but how he would like to both. Instead, he strainswith his head and arms and legs start flying.."

Francis N. Balch, 130 Prince St.,Jamaica Plain, Mass. " I enclose a reprint of a review I wrote of Morris's " Field Guide to the Shells of Our Atlantic Coast". It was printed in the Bulletin of the Mass. Audubon Society where you would be very unlikely to see it. I suppose in the course of time there will be a " Field Guide for the West Coast."

It seems odd that I should be buying any mollusk items since for the past three years I have been selling off the quite large conchological library which I had aquired by purchase,gift and exchange during the past 60 years. Harvard bought most of them. But I have retained my Nudibranch library and would still be glad to fill any gaps in it. There are not many and those mostly fairly recent items. I believe that my collection is almost undoubtedly the best on this side of the Atlantic though I don't know what MacFarland up at Stanford has. Probably I shall have to sell it fairly soon as I am getting elderly and am confined mostly to a wheel chair."

D.L. Emery, 121 20th Ave., So., St. Petersburg 5, Florida. " Friend Burch. Not a business letter but just a friendly missive, hence the informality.Nearly a full year has passed since our meeting in Pacific Grove and our little chat in one of the halls. Another birthday has passed for each of us and mine was a date 1 long to be remembered. A letter from Miss Brewster a couple of d days ago tells me that she spent a very pleasant afternoon with you so I suppose she told you all about the banquet given in my honor at Gulfport. Nevertheless I thought a couple of snap shots taken out there would give you a little better idea of the time than otherwise so I am sending them.

59 were present and did they all enjoy themselves. I'll say YES. As soon as the tables were set Captain Haas struck up with the song " Happy Birthday to Ou" and followed it with " For he's a jolly good fellow as everybody knows". Everybody joined in and did it ring out.

Next 2 big cakes were brot to me and after a few words I stood up and spoke my piece. Then he gave out that he was going to call on several of the others for a few words allowing 3 minutes no more for each. After a few snap shots we took to the tables and the way the grub, coffee, fruit juices and icea cream dissapeared was a caution. There was no scarcity of anything.

A real good purse had been collected and it was presented to me with a little speech from the toastmaster and it with a few birthday cards, some containing one to five dollars helped out greatly.

One or two shells were given me and among them an Aporrhais labradorensis, which completes my set as I now have the occidentalis from Casco Bay, mainensis from Frenchman's Bay, farther east and now labradorensis direct from Labrador.

Another good addition to my collection is Pleurotomella agassizii Verrill and Smith , which the donor says will not be found in more than 3 collections. They were dredged in very deep water off Martha's Vineyard in 1889. Original label with them. Still another good addition is 2 specimens of Tellidora burnetii rec'd from R.R. Alexander of La Mesa, Calif. So you see my collection is growing by leaps and bounds."

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The radio newscaster June 5th gave several minutes to the devastation caused by Achatina fulica Fer. on the island of Guam stating that all efforts at control so far had failed. He stated that certain scientists had been sent to Africa to visit the place of origin of this pest seeking some enemy that might possibly be imported to Guam in an effort at biological control. He also suggested that perhaps we might develop a taste for them such as the Japanese and certain Europeans. They consider them a great delicacy.

Personally the editor here is not greatly impressed but if someone will fix up a platter with plenty of salt and pepper might hazard a little nibble at least. Octopus wasn't too bad.

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Edgar Allan Poe's " Conchologists First Book". At a recent meeting of the Conchological Club this book was mentioned and no one present could recall exactly whoch book or books Poe had been acused of plagerizing.

A paper by Colin Matheson in the Journal of Conchology, vol.22,no.6, May,1945 discusses this matter at length. It was claimed that Poe's work was largely taken from Captain Thomas Brown's " The Conchologists Text Book" and also used material from Wyatt's " Manual of Conchology". The entire case both pro and con is well covered in the paper by Matheson.

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Nature Lore, the paper published monthly by the Agassiz Nature Club of Long Beach discusses the efforts of the club to secure a proper museum building for their collections. The Long Beach Shell Club issupporting them.

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Minutes of the Conchological Club of Southern California

The first Tuesday evening of May found the Conchological Club of Southern California meeting as usual at the L.A. County Museum. Twenty three members and guests were present.

Mr. E.P. Chace called the meeting to order. The April Minutes were read and approved. We learned that Mr. Post in Tampa missed seeing Dr. Hill by twenty minutes. Mrs. McGowan of Santa Barbara and her three well behaved little sons were among the guests. We were glad to welcome back Mrs. Church and thankful that her accident was no worse. There was a very informal discussion of- the papers received from various sources- continuing volun--teer work with the Minutes- the matter of relief to fellow scientists in Europe- the fact that some shells have already (con.)

been sent to the Hamburg Museum and reminding all of the check list. Mrs. Burch moved that a committee be appointed to draw up a plan for carrying on the business of putting out the Minutes. It was carried and the chair appointed a committee of three, Dr. Gregg, chairman, Mr. Turver and Mr. Church. The financial report of the Minutes was received.

$7.86 was contributed for relief and Mrs. Burch graciously agreed to take charge of the project. The meeting was then turned over to Mrs. E.P. Chace, who gave an interesting and informative paper on West Mexican Chitons. Some of the specimens shown as illustrations were of unusual beauty.

Respectfullt Submitted- Hariette Gillis

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NEW PUBLICATIONS RECEIVED

The Nautilus, vol.61, no.4, April,1948. The only note dealing with the fauna of this coast was one under Notes and News by W.J. Eyerdam " Extinction of Monadenia fidelis semialba(Henderson). Mr. Wm. G. Fargo published a paper " New Vexillum and Aesopus from the Pliocene of St. Petersburg, Florida". Druid Wilson " Notes on Perplicaria Dall and its systematic position". An excellent paper to be read with profit by all is one by Charles B. Wurtz and Anne Harbison " An Aid to the Description of Recent and Fossil Gastropoda". " Anatomy of Diplomorpha delatouri.." by Yoshio Kondo of the Bernice P. Bishop Museum, Honolulu. " The Taxonomic and distributional history of the freshwater mussel Elliptio complanatus (Dillwyn,1817) by Max R. Matteson. A continuation of the interesting work being done by Mr. Henry Dodge " Lamarck's Prodrome D'une Nouvelle Classification Des Coquilles".

California Fish and Game, vol.34, no.2, April 1948. One article in this issue is of interest to conchologists- 1947 Pismo Clam Census. " The results indicate a reduction of 43 percent in numbers of clams on the beach since the 1946 census. The poor 1947 set accounted for the greatest decrease, whereas clams four years and older were 89 percent as numerous as last year..."

Shell Notes by Frank Lyman. Vol.2, Numbers 2 and 3, May,1948. It is a real mystery how Frank turns out such a great little periodical without charging the several dollars a year that it is well worth. Of course, Frank has thousands of the finest of shells for sale but one would never suspect it from Shell Notes which seems to be a first class scientific journal with no suggestion of its being a sales medium in any way.

Among other interesting items in this issue is a paper by Dr. R. Tucker Abbott of the U.S. National Museum " Notes on the Anatomy of a Giant Subspecies Melongena corona From Florida". The species discussed and figured is Melongena corona perspinosa Pilsbry,1934. This fine paper illustrated by two pages of plates is followed by Frank's own notes on Melongena research illustrated by three double plates. An interesting letter follows from one of our members Mr. Ernest N. Wilcox of San Luis Obispo.

Report on the Canal Zone Biological Area- From Smithsonian Report for 1947. This very interesting report from Dr. James Zetek to Dr. Alexander Wetmore should be read by all students of natural sciences. The great work of this establishment is not fully appreciated. It is difficult for a Southern Californian to immagine 143 inches of rain in one year.

TRITON,HELMET AND HARP SHELLS by Maxwell Smith

The new book has just been delivered and is fully up to the authors usual high standard. The edition is limited and it is suggested that those who intend to add it to their libraries do so at once in order to avoid a possibility of being dissapointed.

The book sells for $5.00 . Your order will receive prompt and personal attention if sent to John Q. Burch, 4206 Halldale, Los Angeles 37.

Other still available books by Maxwell Smith follow:

Panamic Marine Shells	$6.00
A Review of the Volutidae	$6.00
East Coast Marine Shells	$5.00
The Rock Shells	$5.00
World Wide Sea Shells	$4.50

A few other recommended publications are:

West Coast Shells by Keep and Bailey	$3.75
A Field Guide to the Shells by Morris	$3.50
Oldroyd- Marine Shells of the West Coast of North America paper bound $8.00 cloth bound	$12.00 4 vols.
Guberlet- Animals of the Seashore	$2.50
Roughley: Wonders of the Great Barrier Reef	$5.00
Edmondson: Reef and Shore Fauna of Hawaii	$3.00
Dall,Bartsch & Rehder: Manual of Recent and Fossil Pelecypod Mollusks of the Hawaiian Islands	$4.00
Caum: Check List of Hawaiian Land and Freshwater Mollusca	$1.00
Illustrated Key to West North American Pelecypod Genera by A. Myra Keen and D. Frizzell- was out of print now again available	.75¢

Of the bound books of the Conchological Club of Southern California- 3 vols. $15.00 there are exactly 7 sets left on hand. When these are gone the set will be definitely ' out of print'.

Any of the above may be had from John Q. Burch

MINUTES 81
JULY 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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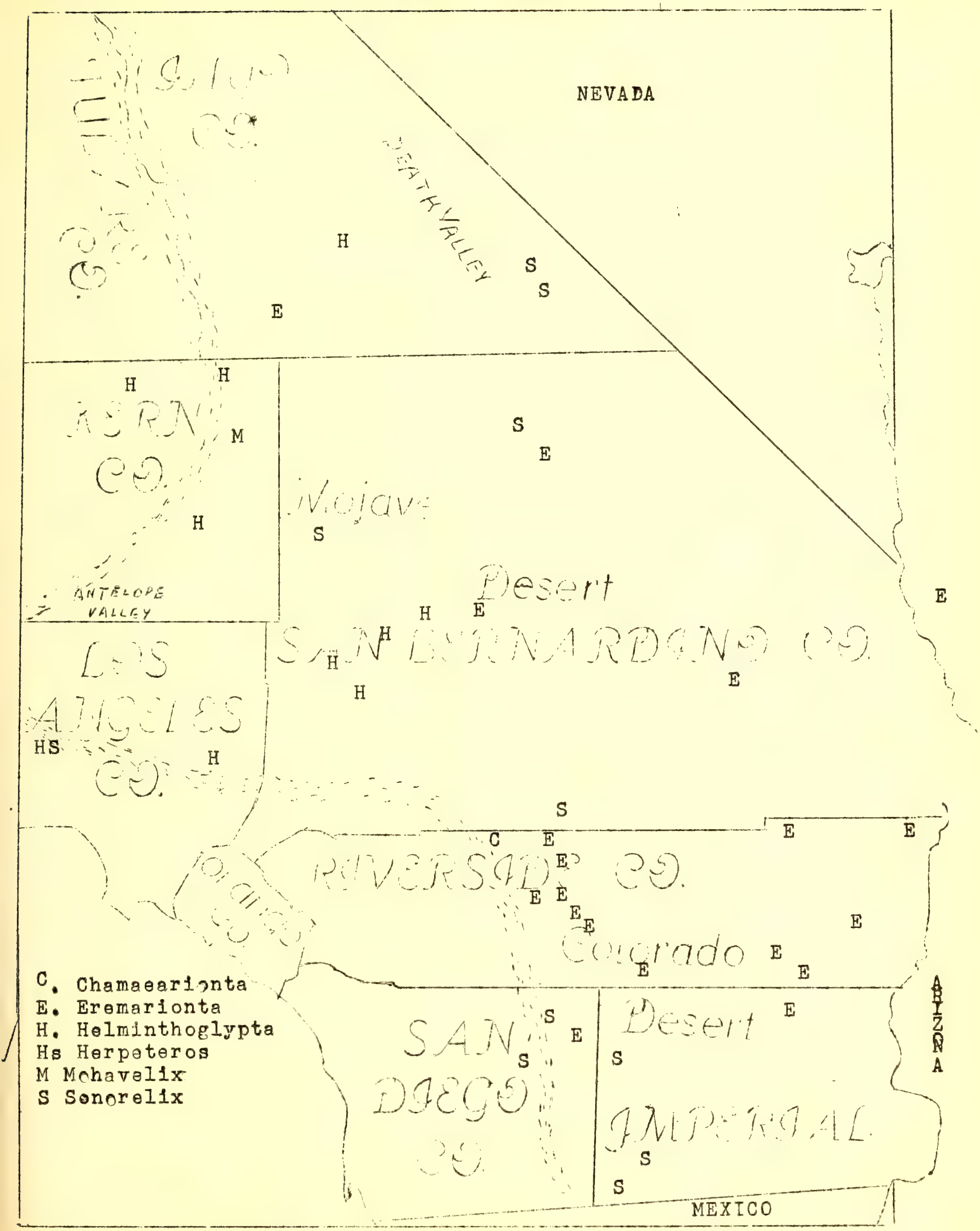
HELICOID SNAILS OF THE DESERT REGIONS OF CALIFORNIA

by Wendell O. Gregg

(Read before the American Malacological Union, June 18,1947)

The two great deserts of California, the Mojave Desert and the Colorado Desert, comprise the greater portion of southern California. This desert region extends as far north as the northern limit of Death Valley. To the west, it extends to and includes Antelope Valley, a western extension of the Mojave Desert. The western boundary is formed by the Sierra Nevadas, the Tehachapi, San Gabriel, San Bernardino, San Jacinto,Santa Rosa, San Ysidro, Cuyamaca, and Laguna Mountains. Those deserts extend eastward to the Colorado River and in the north, the Nevada state line may be arbitrarily taken as the eastern boundary. A line arbitrarily drawn from Morongo Pass easterly to the Colorado River marks the boundary between the Mojave Desert on the north and the Colorado Desert on the south. This line represents the boundary line between San Bernardino and Riverside Counties. Each of these


NEVADA
INYO CO.
TULARE CO.
DEATH VALLEY
KERN CO.
ANTELOPE VALLEY
Mojave Desert
SAN BERNARDINO CO.
LOS ANGELES CO.
ORANGE CO.
RIVERSIDE CO.
Colorado Desert
SAN DIEGO CO.
IMPERIAL
ARIZONA
MEXICO
C. Chamaearionta
E. Eremarionta
H. Helminthoglypta
Hs Herpeteros
M Mohavelix
S Sonorelix

Outline map of California deserts showing type localities of land snails of the desert region.

deserts, with the exception of a portion contiguous to the Colorado River, forms a natural drainage basin with its respective sink. This vast area is made up of arid plains, mountain ranges, canyons and valleys, all of which with their varied features furnish no end of enchantment for the desert traveller and explorer.

This desert region, forboding as much of it may appear, has its own peculiar molluscan fauna which is particularly rich in species and subspecies of helicoid land snails. To these land snails, many of which are of subterranean habit, the natural barriers are absolute.

In the area under consideration there are 41 species and subspecies of helicoid land snails which are particularly adapted to their habitats and restricted to the desert area or adjacent semi-arid regions. These 41 forms represent the four following genera: *Helminthoglypta* (9 forms), *Micrarionta* (20), *Sonorelix* (11) *Sonorella* (1).

Helminthoglypta: Characteristics of this genus should be familiar to all of us and need not be repeated here. The desert modifications of this genus are generally smaller than the forms found in the less arid regions. When the subgeneric relations of the entire genus are better understood, the desert species will probably fall into two subgenera. Dr. Pilsbry states that *H. graniticola* is a specialized member of the typical subgenus of *Helminthoglypta* while *mohaveana* belongs to the *cuyamacensis* group. As will be seen from the accompanying map, six of these species are from the southwestern Mojave Desert while three are from farther north in Kern and Inyo Counties. *H. isabella* is found only under dead yuccas. *H. frontiphila* may be found deep in rock piles, in piles of flood born debris, or under dead yuccas where other cover is not available. The type locality of *frontiphila* is Little Rock Creek Canyon which drains into the Mojave Desert. However its range extends through Soledad Canyon to include its western half which is in the Pacific drainage. Another desert helicoid, an unnamed *Sonorelix* has also been discovered here recently. It will be mentioned again under the proper genus. In this connection it is of interest to note that Soledad and Mint Canyons form a natural pass between the Mojave Desert and the valley of the Santa Clara River. A number of forms of desert reptiles have also been taken in the western portion of those canyons. *H. caruthersi* is known only from two specimens. One was found sealed to a small fragment of wood. The other desert forms of *Helminthoglypta* are found associated with rocks, particularly in rockslides, and the larger the rocks, the better the chances of finding snails. We should also mention the two common forms *H. traski* and *H. tudiculata* which are to be found in desert habitats where these are contiguous to their distribution. At one time, in White Water Canyon, but a few feet from I took *M. aquae-albae* , a peculiar form of *H. tudiculata* was found. It had faint malleations suggesting *H. t. grippi* and the umbilicus was entirely closed as in the form known as *H. t. imperforata.* On my return to this locality some years later, I found *H. tudiculata* but these were not distinguishable from the widely distributed form known as *H. t. angelena.* In the more arid habitats *H. traski* is to be found under dead yuccas. There is a desert modification of *H. traski* found under dead yuccas in the vicinity of Mint and Soledad Canyons

which presents distinguishing characters sufficient to justify giving it a subspecific name. I have hesitated to do this until I had sufficient material to study the anatomy and to have a clear idea of the limits of variation in the shell as well as the limits of its distribution.

Helminthoglypta are not found in Nevada or Arizona though the range extends for some distance into Lower California.

List of species of *Helminthoglypta* with type localities.

1. *H. mohaveana* Berry. Victorville grade, east side of Victor Mts. San Bernardino County
2. *H. graniticola* Berry. Isolated hill 4 miles southeast of Victorville on Box Springs Road, San Bernardino County
3. *H. crotalina* Berry. Sidewinder Mine, north end of Granite Mts., San Bernardino County
4. *H. jaegeri* Berry. Near Sweetwater Spring, Ord Mountains, San Bernardino County.
5. *H. frontiphila* Gregg. Little Rock Creek Canyon, west side of San Gabriel Mts., Los Angeles County
6. *H. greggi* Willett. Isolated Hill 3½ miles south of Mojave, Kern County
7. *H. caruthersi* Willett. Morris Canyon, branch of Indian Wells Canyon, Kern County
8. *H. isabella* Berry. Two miles east of Isabella, Kern County.
9. *H. fischeri* (Bartsch) Johnson Canyon, Panamint Mountains, Inyo County

Micrarionta: The genus *Micrarionta* is represented in the desert region of California by two subgenera, *Eremarionta*, with 19 species and subspecies and *Chamaearionta*, with one species.

Eremarionta is distinguished by the following characteristics, embryonic whorls papillose in spiral and oblique series, the papillae lengthened; the mucous glands both descend instead of being arranged as in the typical subgenus. The 19 species and subspecies listed under *Eremarionta* are rock dwellers. I have been unable to find any record of *Eremarionta* from Nevada. Its range extends for a short distance into Arizona and south into Sonora. I have been unable to find any record of its appearance in Lower California.

Chamaearionta is characterized by its small size, thin lip, heavy papillation of the entire surface, rough brownish periostracum, and brownish maculations of the animal. Genitalia as in *Eremarionta*. But one species is known, *M. aquaealbae* from White Water Canyon. It is found in rock slides and among loose leaves and mould.

List of Species and Subspecies of *Micrarionta* with Type Localities

Subgenus *Eremarionta*

1. *M. rowelli acus* Pils. Needles Peaks near TopockmArizona; also found Mojave Mts., opposite Topock and mountains northwest of Essex, California.
2. *M. rowelli unifasciata* Willett. Newberry Springs, north end of Kane Mts., San Bernardino County.
3. *M. rowelli mccoiana* Willett. McCoy Well, McCoy Mts., San Bernardino County.
4. *M. rowelli bakerensis* Pilsbry and Lowe. Half mile west of Baker, San Bernardino County
5. *M. rowelli amboiana* Willett. Six miles northwest of Amboy,San Bernardino County

6. *M. rowelli granitensis* Willett. Northwest of Granite Mts., Riverside County
7. *M. rowelli chuckwallana* Willett. One mile south of Corn Springs, Chuckwalla Mts., Riverside County
8. *M. rowelli chocolata* Willett. Near Beal's Well, Chocolate Mts., Imperial County
9. *M. immaculata* Willett. East slope of Riverside Mts., 7 miles south of Vidal, Riverside County
10. *M. millepalmarum* Berry. Thousand Palms, Riverside County
11. *M. brunnea* Willett. Near Chuckwalla Spring, Little Chuckwalla Mts., Riverside County.
12. *M. orocopia* Willett. South slope of Orocopia Mts., 2½ miles north of Dos Palmas Spring, Riverside County
13. *M. argus* (Edson). Argus Mountains, Inyo County
14. *M. indioensis* (Yates) Indio on south side of valley,Riverside County
15. *M. indioensis walcottiana* (Bartsch). San Jacinto Mts., at Palm Springs, Riverside County
16. *M. indioensis cathedralensis* Willett. Cathedral Canyon, Riverside County
17. *M. indioensis xerophila* Berry. Five miles west of Indian Wells, Riverside County
18. *M. indioensis remota* Willett. Borego Mountain, San Diego County.
19. *M. morongoana* Berry. Morongo Pass, 2 miles below Morongo Inn, Riverside County

Subgenus *Chamaearionta* Berry.

20. *M. aquaealbae* Berry. Whitewater Canyon, Riverside County

Sonorelix Berry,1943: Snails of the typical subgenus are characterized by a sub-retiform sculpture on the embryonic whorls and by the absence of dart sac and accessory mucous glands. Not all of the species listed have been dissected but the papillation of the embryonic whorls is very distinct from that of *Eremarionta* with which the genus was formerly confused. Except for Willett's record of finding *S. orcutti* under dead agaves, *Sonorelix* s.s. has been found only among rocks. Distribution of *Sonorelix* s.s. : Mojave and Colorado Deserts and extending a short distance into Lower California. There are no records from Nevada or Arizona.

There are two species of land snails in northern Lower California, *Micrarionta inglesiana* Berry (1928) and *Micrarionta chacei* Willett (1940), which both authors doubtfully referred to the subgenus *Eremarionta*. Dr. Pilsbry (1939) pointed out the resemblance of their apical sculpture to that of *Helminthoglypta*. Recently, the anatomy of *inglesiana* has been studied by Dr. Berry and it is found to belong to *Sonorelix* , with certain distinguishing characters separating it from the typical subgenus. To this subgeneric group, Dr. Berry has given the name *Herpeteros* (1947) *Herpeteros* is characterized, anatomically, by the retractor muscle which is inserted directly upon the proximal end of the penis instead of on the epiphallus as in *Sonorelix* s.s. The penis is very large and filled by a large muscular verge.

Recently, in the western end of Soledad Canyon, I have found under dead yuccas, an undescribed form of *Sonorelix* belonging to the subgenus *Herpeteros*. A description of this new snail will appear soon in the Bulletin of the Southern California Academy of Science. The long jump in range of the Lower California subgenus

is still a puzzle. The Soledad Canyon species is closely related to *S. chacei* from nine miles north of Ensenada, Lower California.

Sonorella: A single species, *S. micrometalleus* (Berry) is found deep in rock slides in a canyon 3½ miles south of the Petrified Forest in Kern County. It is placed in the subgenus *Mohavelix* Berry,1943. The papillation of the embryonic whorls suggests affinities with *Eremarionta*, with which it was formerly listed, but study of the anatomy reveals not only the absence of dart sac and mucous glands but also absence of a supermaticthecal diverticulum. The epiphallus is equipped with a minute adnate caecum.

List of Species of *Sonorelix* and *Sonorella* found in California with Type Localities

Sonorelix s.s.

1. *S. melanopylon* (Berry) . West side of Black Canyon, Black Rock Hills, San Bernardino County
2. *S. ora* (Willett). North end of Fish mountains, Imperial County
3. *S. carrizoensis* (Willett). Painted Gorge, Carrizo Mountains, Imperial County
4. *S. harperi* (Bryant). " Warner Hot Springs, San Diego County"(?)
5. *S. orcutti* (Bartsch). Near Mountain Springs, Imperial County
6. *S. borregoensis* (Berry). Palm Canyon, west side of Borrego Valley, San Diego County
7. *S. rixfordi* (Pilsbry). About 10 miles west of Twenty Nine Palms, San Bernardino County
8. *S. avawatzica* (Berry). Five miles south of Cave Springs, Avawatz Mts., San Bernardino County
9. *S. avawatzica eremita* (Pilsbry). Nopah Mts., three miles east of Resting Springs, Inyo County.
10. *S. baileyi* (Bartsch). Hill above Resting Springs, Inyo County.

Subgenus *Herpeteros* Berry,1947

11. *Sonorelix* species undescribed. Soledad Canyon, Los Angeles County.

Genus *Sonorella*, subgenus *Mohavelix*

1. *S. micrometalleus* (Berry). El Paso Range, 3½ miles south of Petrified Forest, Kern County

BIBLIOGRAPHY

Berry, S. Stillman
1928. A New Land Snail from Lower California with Notes on Other Species. Jour. Ent. and Zool., vol.20, No.4, pp. 73-83, pl. I-II
1943 On the Generic Relationships of Certain California Xerophile Snails. Trans. San Diego Soc. Nat. Hist. Vol. X, No.1, pp. 1-24, pl. 1-2, figs. 1-8, map.
1947 On the Generic Relationships of Certain Lower California Helicoid Snails. Leaflets in Malacology, Vol.1, No.3, pp. 9-12.

Bogert, Charles M.
1930. An annotated list of the Amphibians and Reptiles of Los Angeles County, Calif. Bull. So. Calif. Acad. Sci. Vol. XXIX, pt.1, pp. 3-14

Jaeger, Edmund C.
1938. The California Deserts, a Visitor's Handbook. Stanford University Press.

(con.)

Pilsbry, Henry A.
1939. Land Mollusca of North America (North of Mexico). Acad. Nat. Sci. Phila.,Monograph No.3, Vol.1, Pt. 1.
Willett, G.
1940. A New Land Shell from Lower California. Bull. So. Calif. Acad. Sci., Vol. XXXIX, pt.1, pp. 80-82, pl. 12.

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George Kanakoff: Working on the files I stumbled on the s et of Tegula (Chlorostoma) regina (Stearns),1892, collected by Mr. Clarence Chesebro, Alta Loma, Calif. from his lobster traps 700 feet N. of Santa Barbara Id., Calif. on November 7,1940. I remember sharing the lot with the late George Willett, so that there is a set in his collection. That extends the range a little northwards.

The set mentioned is in LACMIP Collection L. 2151-888.

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'Labels John Q. Burch

The dearth of data on the labels in many fine collections is a matter of such importance that it should be more frequently discussed. I was instructed at the beginning of my collecting career to make certain that every label gave at least the following: 1. the name of the collector. 2. the exact locality even to landmarks and an estimate of the distance from some well known place. 3. the exact date of collecting 4. the habitat- if littoral whether rocky,sandy,muddy- an estuary or the open shore- or if dredged a very accurate note of the depth, if possible the location fixed by a sextant, the type of the bottom etc.

For years all sets sent out in exchange carried this data from us with only our name on the label. I have purchased a number of large collections in the last few years and have been surprised to find that the great majority of sets bear a label merely mentioning the name of the shell followed by some such informative note as Philippine Islands, Australia etc. They might as well label all of our shells North America. Few carry even a suggestion of the collector's name. In passing these shells along to my correspondents I have the custom of giving the name of the shell, the locality as stated on the label that was with the shells when they came to me, and followed by the name of the person whose collection they came from- i.e. Harpa harpa Linne, A. Powers Coll.

In order to distinguish such sets of shells from those with the proper data I adopted the use of the term leg. to follow the name of the collector when definitely known. The first shells I received so labelled came from Dr. William J. Clench. Dr. Clench explained the term to me in a personal communication. leg. = legit, i.e. collector- or more nearly, he collected. " It is of European origin and has come into use in this country since my time. I recall that I was one of the early ones to use the term. Its value is that leg. following a name means that John Doe, leg. was the collector, and it avoids the error of Coll. which can stand for collection. Knowing the collector's name allows much more in running down a name- even type material".

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We are frequently asked about the present cost of Johnsonia.

Johnsonia Vol.I- unbound $9.54- bound	$12.25
Vol. II to date	$4.92
Subscription (100 pages)	$4.00

The American Malacological Union- Fourteenth Annual Meeting- Carbegie Museum, Pittsburgh, Pa. August 25 to 27,1948.

Those who are fortunate enough to attend should perhaps write Mrs. Harold R. Robertson, 136 Buffum St. Buffalo 10, N.Y.

Hotel headquarters will be at the Hotel Webster Hall, 4415 Fifth Ave., one block north of the Museum.

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Some Publications Received

Proceedings of the Malacological Society of London- Vol.27, pt.5 31st May,1948. A number of interesting papers but none that directly concern the nomenclature of the fauna of this coast.

Journal of Conchology- Vol.22, no.12, 31st May,1948.

Torreia- Publicacion Ocasional Del Museo Poey, Universidad De La Habana,Cuba. Num. 13, Mayo 30,1948.

This is the first copy of this publication to come to our desk. It is printed on excellent paper and the illustration is good. This issue is devoted to a paper by Carlos G. Aguayo and Miguel L. Jaume describing a new genus and a new species.

Revista De La Sociedad Malacologica " Carlos De La Torre" Vol.6, Num.1, Junio 10,1948. There are the usual fine papers in this issue- the conclusion of the Revision of the Genus Farcimen by Oscar Alcalde Ledon, The republication of The West Indian Marine Shells by Henry Krebs is being continued. Dr. Wm. J. Clench has a paper in this issue in English.

Bulletin of the Southern California Academy of Sciences- Vol. XLVII Part I. Jan.-April,1948. There are two papers in this issue of special interest to us. " Four New Gastropods From the Upper Pleistocene of Newport Bay Mesa, Orange Co., California" by George Willett. This paper was written by Mr. Willett shortly before his death. The new species are *Turbonilla grouardi* named in honor of Mr. and Mrs. F.L. Grouard who discovered this deposit; *Odostomia effiae* named in honor of Mrs. Effie M. Clark; *Odostomia elsiae* named in honor of our member Mrs. E.P. Chace; and *Triphora kanakoffi* named in honor of George P. Kanakoff.

Another valuable contribution is " A Check List of the Haplotrematidae,Testacellidae and Zonitidae of California" (From Henry A Pilsbry's Monograph) by William Marcus Ingram.

Basteria Vol. 12, No.1 1948 - the journal of the Netherlands Society.

Occasional Papers on Mollusks Vol. 1, No. 13, June 22,1948 " A Catalogue of the Family Truncatellidae with Notes and Descriptions of New Species" by Wm. J. Clench and Ruth D. Turner. This is a valuable contribution listing all of the species of this group.

Fisheries Newsletter, April 1948 - Australia. This issue contains a number of rather interesting papers on mollusks. " Romans Were First to Cultivate Oysters"; " Japanese Oyster Industry"; Oyster Culture at Matoya Bay"; " Pearl Shell Take Was 803 Tons- £ 488,900"

The passenger pigeon [illegible] Thirty-fifth annual [illegible]
Carnegie Museum, Pittsburgh, Pa. [illegible] 1946.
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1945 [illegible] Buffalo, N.Y.
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Farms Ave., one block north of [illegible]

Conchological [illegible]

Proceedings of the [illegible]
31st.May,1946. [illegible]
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Journal of Conchology, Vol. [illegible] 1946.

Circular-Publicacion [illegible]
[illegible] Cuba, [illegible] 1946.
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Miguel L. Jaume [illegible]

Revista de la Sociedad Malacologica "Carlos de la Torre"
Vol.6, No.1, [illegible] 1946. [illegible]
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Bulletin of the Southern California Academy of Sciences [illegible]
Part 1, [illegible]
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Nautilus Vol. 59, [illegible] 1946 [illegible]
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Occasional Papers on Mollusks [illegible]
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a number of papers of interest [illegible]
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" Uber Den Bau Und Das Wachstum Des Konzentrischen Operculartypus Bei Gastropoden" by Bengt Hubendick- Arkiv For Zoologi- 1948 28 pages, 1 plate, 14 text figures.

" Studies on Bulinus" by Bengt Hubendick. Arkiv For Zoologi, 1948- Stockholm 63 pages, 2 plates and 173 text figures. This is a very thorough paper.

" Sur Les Variations De La Taille Du Rein Chez Lymnaea limosa (L.) by Bengt Hubendick- Ext. du Jr. de Conchyliologie- 1948

Bulletin No. 2 of the Auckland Museum Conchology Club. The format of this paper is somewhat different having a printedcover and stapled. There are a number of very good papers by various members.

Wapenbroeders - a publication of the Netherlands Indies- for March 1948 contains a paper on the so-called " Sawahs" (rice fields) and figures and discusses some of the mollusks living in those swampy areas.

" A New Siphonaria from New Guinea" by Bengt Hubendick- Bull. Musee royal d'Hist. nat. de Belgique.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA-June,1948

Thunder and showers hustled the members into the June meeting of the shell club at the usual time and place. Twenty seven members and guests including Miss Helen M. Brewster of St. Petersburg,Fla. were present.

The chairman, Mr. E.P. Chace called the meeting to order. The minutes of the May meeting were read and approved. There were no reports from standing committees, Mrs. Burch reported the purchase and shipment of food to a conchologist of Austria. Her work was appreciated and her report filed. More shells are being sent to the Hamburg Museum, the postage for which the club voted to pay.

The paper of the evening was ably given by Mr. Albert Heller on " Color and Design in Mollusks". Many beautiful shells were used to illustrate his talk in which he emphasized the fact that nature alone could produce such exactness and also variation and how little man knows of the color pigments and how the mantle is able to regulate the patterns.

A discussion followed on the subject of albinos. Mr. Edwards used the albino Hopi Indians of Second Mesa to illustrate- said it is not hereditary, apparently not due to food but possibly some gland maladjustment.

Dr. Howard spoke of the fact that this summer was the one hundredth anniversary of the American Association for the Advancement of Science and what were the pri~~v~~biledges of membership.

Mr. H. Arden Edwards mentioned Mrs. Oliver's interest in a conchological project and Mr. Burch moved and Mr. Caruthers seconded , that the club heartily endorse her idea. It was unanimously carried. Respectfully submitted, Harriette Gillis

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Juby Meeting

The regular monthly meeting of the Conchological Club of Southern California was called to order by the president E.P. Chace with twenty five members and guests present. We were glad to welcome Miss Ruth Simpson of the Southwest Museum staff but regretted

[illegible]

[illegible]

" Sur les [illegible]

Bulletin No. 7 of the [illegible]
of this paper [illegible]
samples. [illegible]

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1931 contains [illegible]
and it [illegible]
swampy areas.

" A New [illegible]
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MINUTES OF [illegible]
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that Dr. Sanchez Roig of Havana,Cuba could not attend a meeting.

The minutes of the June meeting were read and approved, and as there was no other business the time was given over to Mr. H. Arden Edwards. His paper on the use of shells by primitive man was excellent, informative and interesting. His chart showing the trade routes the shells went over going from the Southern California coast , from the Gulf of California and the Gulf of Mexico, vividly illustrated the distance shells were carried and how much intercommunication there was in remote times. He brought a very valuable and beautiful collection of shell ornaments,money and fish hooks which showed great ability in workmanship in cutting and carving shells and the large variety of shells used, All were so interested the meeting adjourned later than usual.

Respectfully submitted- Harriette W. Gillis

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A Few Notes About Collectors-

Paul H. Steele, P.O. Box 935, Sacramento,Calif. Note the new address. Steele reports few shell enthusiasts in his new city.

E.J. Post, 3105 Wyoming St.,Tampa 9, Fla. Note the new address.

Dr. A. Myra Keen- Effective July 1,1948 there will be a slight change in my address.I am relinquishing my box at the Stanford post-office and henceforth should be addressed at : Dept. of Geology, Stanford University, Calif.

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A brief note about the Calvin and Ricketts " Between the Tides". The sudden death of Dr. Ricketts delayed the book briefly but Stanford University Press now advises that they expect to deliver it in August.

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Mr. and Mrs. George L. Harrington of Palo Alto have been making an extensive trip visiting Puerto Rico,Virgin Islands etc.

H.B. Herrington, Newburgh,Ontario,Canada "... the Royal Ontario Museum.. have enabled me to spend about 10 days here studying Sphaeriidae types at the Museum of Comparative Zoology.

Mr. Dwight Taylor is spending the summer at 4 Nantucket Ave., Nantucket,Mass. and from his interesting letters must be meeting most of the outstanding conchologists of that coast.

Ted Dranga recently sent a brief note- " Collecting in Key West and having good results." And when Ted says collecting is good it really must be.

Mr. A.S. Koto and Miss Adele Koto- They return from Florida and take off on another trip to Northern Wisconsin. Why not try the great state of California some time.

MINUTES 82
AUGUST 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially inwited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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Walter J. Eyerdam- " When I sent the article about clam digging on Copalis Beach for publication, I sent the incompleted list of 29 shells by mistake so I hereby send the names of the shells that I collected that were omitted."

30. Clinocardium californiensis Deshayes 2 specimens
31. Entodesma scammoni Dall 1 Specimen This is the only one that I ever found. It has a beautiful bluish irridescent interior.
32. Saxicava arctica Linne a few
33. Saxicava pholadis Linne several
34. Acmaea scutum Eschscholtz common
35. Littorina rudis Donovan- common
36. Littorina sitchana Philippi- common
37. Argobuccinum oregonense Redfield- two
38. Lacuna divaricata Fabricius- scarse
39. Dentalium pretiosum Sowerby- one worn shell
40. Venerupis staminea orbella Carpenter- one shell

* The above continued from #79, p.4, April,1948 Minutes*

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A personal note from Mr. Eyerdam from Port San Juan, via Latouchi,Alaska,July 30,1948 " ... Our herring fishing has been very poor at this station owing to a number of circumstances altho the neighboring plants have done quite well. As work is very

slack at present and won't be very much until about the first week in September I have as usual devoted much of my spare time to making a large series of all the plants I could find including the Cryptogams, except fungi. Now that the flowering season is nearly over I shall do a lot of labelling. Only a few grasses, sedges and late flowers remain to be collected. It is always surprising to note how rapidly the perenniel plants grow in these northern latitudes but I have never seen them grow as they do around here. The best examples are the wild rhubarb (*Heracleaum lanatum*) which are up to 8 ft. high with huge leaves and panicles of white flowers. The record in length for skunk cabbage (*Lysichiton americanum*) Halton and St. John is 4 ft. 10 inches, but there is one just outside of my bunkhouse window that is already 6 ft. and one inch in length.

There are only two species of land snails here. One is *Vespericola columbiana* var. and the other one is *Haplotrema vancouverensis*. I have been unable to find any other land snails on islands of Prince William Sound altho there are about a dozen species and varieties on Kodiak Island.

So far I have found but 70 species of mollusks, but hope to bring the list up to about 100 species.

The salmon fishing is now on full blast for three weeks and will last about two weeks longer. We have about 60 Filipinos in the cannery. It generally takes 4 or 5 months for the shore crew to prepare the traps and gear for the 3 weeks or one month salmon run.

P.S. Just before I left Seattle in April I received from Prof. Bernhard Rensch of Munster,Westfalen,Germany the three volumes of Thiele's Handbuch der Weichthiere.

An earlier note from Eyerdam dated June 5,1948 conatined some interesting comments on his station. Immagine this in June. " The days are warm and bright even tho there is still 6 ft. of snow right down to the shore at Port San Juan. It hadn't rained or snowed for 2 months but for the past two weeks the weatherman is trying to make up the deficiency. The snow was 16 ft. deep here in the winter but there are places on Pr. Wm. Snd. like Valdez where the average winter snowfall is 25 ft.

I have had a lot of bad luck during the past months with mailing packages and important letters. Unfortunately I either forgot to insure everything or lost the receipts. My wife sent over 300 food and clothing packages to Germany last year. About one out of five were pilfered or stolen. I sent a package with 150 good specimens of shells to a collector in France. He never got them. Two months ago I sent a fine Pleurotomaria in exchange for a fine rare shell but it was stolen in the mail. I could tell you much worse but what's the use. ..."

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Major H.S. Mort, Mona Private Hospital, Belmont Road, Mosman, NSW, Australia. June 25th,1948. " I was very interested to read in No. 79 of your Minutes of the discovery of a specimen of *Cypraea guttata* at Manus Island. Many years ago there was a specimen of this shell in a Sydney collection which I believe was purchased by the British Museum, for £ 30. This was found in New Ireland at a point about half way up the west coast of the island. Although Hidalgo mentions about half a dozen localities for this shell, I have been informed on very good authority that most of these are vague, and that the British Museum specimen is the only one in existence of which the

locality is *definitely* known. It should be possible to verify this and if it is correct, it will increase both the interest and the value of Dr. Hill's specimen from Manus Is."

Dr. T. Van Hyning, 2344 West Fairbanks, Winter Park, Florida. " You mention *Tridacna* from Zamboanga. I want to inform you that I have two perfect pairs, each measuring four feet across, and weighing 500 lbs. each. Those were collected at Zamboanga in the province of Mindanao, Philippines, collected by native Moros. Thought you might be interested in this record."

* What is the record for the largest known Tridacna? I tried to check up on it but could locate no data.

Carl I. Thomas- Rt. 2, Box 153-K Costa Mesa, Calif. Note the new address. The old address was 262 Pine, Orange, Calif.

Miss Edna T. Cook- 11874 Iowa Ave., Los Angeles 25, Calif. Note the new address. The old address was 1002 Hobart Blvd., Los Angeles.

E.J. Post, Box 65A, Limona, Florida. This is Mr. Post's address as of Aug. 10,1948. Mr. Post writes that they have no postmaster and the mail has been in a turmoil in his city. That can be easily believed since everything we have sent him for months has been returned. Lets hope that this mailing address will reach him. " When do you expect to issue another Directory?" " When you do leave my name out as I don't want to do any more exchanging".

* Note* We try to list all persons interested in conchology in the directory even though a great many of them are not interested in exchanging in any way.

L.M. Wright, Enterprise,Florida. " I purposely have all mail come to my home address above, but am there only at rare intervals. I am still in the Navy for a few more months until full retirement. My wife is the only one who can keep up with my frequent trips and changes of address. Have had no good collecting for a year but live in hopes. P.S. I find an occasional *Drymaeus dormani* Binney among my orange trees or on lillies. I love [illegible]

Maxwell Smith, Winter Park, Florida. " We had five weeks of travel in Mexico. Land shell collecting there is difficult but we brought back some good things and many colored slides. Fortin, between Orizaba and Cordova, in the State of Vera Cruz was the most beautiful spot we saw, snow capped Orizaba being visible one morning, a rare occurance during the rainy season. At Acapulco we did some dredging from the Terebra, few specimens but choice species obtained."

Alvin Bippus, 1918 Bayard Place, Toledo 6, Ohio " This summer while visiting Guatemala and Mexico we couldn't resist going down to Mazatlan for about ten days in spite of the heat, We found that by collecting from 5:30 to 10:00 A.M. and then hibernating for the rest of the day we could stand it. Since this was our first experience with West Mexican shells we are all excited about our small collection which is probably very mediocre compared to the acquisitions of the Southern California contingent at Guaymas last winter."

Burry's Marine Museum, Route 1, Box 544, Pompano Beach, Florida. We have simply been mailing to Mr. Burry at Pompano,Fla. hence his note " The Post office here has a fit about incomplete addresses. " I do read your Minutes with a great deal of interest. I wonder why there is nothing about dredging. I know you have done a great deal of it with evident success. I have been dredging for many years and find it a lot of pleasure and a source of fine and rare material. Just finished two weeks of it in the gulf stream with a flow of from 3-6 knots per hour. I am using Mill of 1/8 " cable

and have reached 375 fathoms. Shell life in these depths is very poor but crabs,shrimps and also fishes are very abundant. The bottom of the gulf stream at that depth is pure ooze and the trawl at times fills in one swoop, then the trouble begins. It feels as if one were anchored, and speeding up the boat and trusting that your light cable can stand the stress to raise it. We have worked as long as 4 hours to accomplish this. I would like to hear from some of the others that do some of the deeper work."

The following few casual remarks by John Q. Burch relating to some of the dredging problems.

Our experience has been to find that the bottom at depths of over 200 fathoms is composed of ooze with very rare exceptions. The use of a regulation dredge is always very dissapointing because of the fact that it fills at once and contains a small percentage of life. We found that our most successful gear for deep use was a small beam trawl about 6 ft. wide at the mouth and running a net back from it perhaps 18 ft. in length with the last 6 ft. tapering to a cylindrical shaped net of $\frac{1}{4}$ inch mesh or smaller. This would fill also even though we had nothing to drag the bottom but the leaded line at the bottom of the net. However, instead of trying to bring the entire rig up especially when we had it down at times as deep as 3000 ft. we would simply drag it off the bottom and run with it a short distance in this way washing out the ooze and permitting at least a certain percentage of the living forms to drop down into the finer meshed net at the bottom. Then we would lower it again and not bring it on up until we had made as many as 8 or 10 drags on the bottom in this manner. Of course, using the light tackle that we used we would almost necessarily lose the entire trawl occasionally. Bearing this in mind we never tried to make our gear expensive and fancy. We found that by having our blacksmith make up a dozen at a time we could get them made at a very reasonable cost and when we lost one we simply went up forward and got another to put out without having to grieve over the loss of one trawl. The loss of the trawl was often caused by the fact that we would occasionally run into a large number of some such thing as holothurians or even large numbers of some of the deep water sea urchins. Obviously if you fill such a huge net as you have on a trawl with anythingat all that must be raised to the surface as is,the chances of not getting to the surface with it is rather high. Of course, odd things happen. It is a lot of fun at times. I recall the time we just barely made it to the surface with a haul that had everything at the point of snapping. We fondly expected a haul of hauls but found that we had picked up a small ship's anchor which we actually brought aboard. One interesting thing about the bottom is that there seems to be definite colonies of rich material and these colonies or spots have always been a puzzle to us. For example we had one spot off Rocky Point in about 85 fathoms. This was not really deep but conatined a fauna that was almost unbelievably rich. I will not try to list any of the species here but suffice to say that when we did hit this spot we invariably had a haul of many of the rarest as well as some of the most beautiful shells from this coast. But this spot was so small that we would drift off of it in the time it took to bring up the dredge. We carried our charts and our sextant and took the most careful shots time after time. One would think that by using a sextant with at least three shots we could get back in position without difficulty. However, our batting average at best was never

as high as one out of five hauls. It should be explained that the bottom on all sides of this spot was composed of oooze with almost nothing in it other than certain common species peculiar to that m mud. And the spot was certainly no larger than perhaps 100 yards in diameter.

In order to really do deep water work effectively I am inclined to think that it is necessary to work in the same locality long enough to get to know the bottom. We had all of the charts we could buy but finally almost made our own.

In the way of tackle we worked for years trying to perfect something that would work well on bottom composed of pinnacles of rock. Very little work as ever been done on such bottom for the simple reason that it is almost suicide for the dredge to get into them and a trawl is simply out of the question since it would be torn to pieces instantly. The best thing we ever worked out for use here was a circular piece of steel more or less of the shape of the bands on a small wine barrell- probably 18 inches in Diam. To this we attached 3 lines for the bridle leaving long libes to the bit, and on the steel circle we attached a short net well protected with heavy canvas of course leaving the end of the canvass open. The incentive for such work was that these rocky pinnacles were covered with brachiopods and some species of rock shells that were simply not to be had any other way. It might be mentioned that right here on these pinnacles we did at times use a tangle with some success. A tangle is not to be recommended as a piece of gear to collect shells with ordinarily but here we found that we would bring up quite a lot of several of the quite rare deep water Boreotrophons that were not taken in our open dredging. Of course, the student of the echinoderms would have been delighted because the tangle would come up loaded with really beautiful living crinoids and other rarities in this group. In fact deep water sea urchins in great demand by students of this group are a first class nuisance to the shell collector because the tangle will get loaded down with these things and it would take hours to pick them all out of it. For a tangle we used a piece of steel pipe and attached to it all along unravelled manila rope running back possibly 20 ft.

And while thinking ofparticular spots on the bottom we had one rather large place on the north side of the Redondo submarine canyon that we always found interesting and productive . We called this simply the Foram. spot because the foraminifera were so very abundant that after washing we were literally picking out our mollusks from a mass of foraminifera. For some reason this locality was especially good for the collection of some rare genera of the Turridae. As a matter of fact there were a number of things from t this spot that we could never name and think we finally sent them to Dr. Bartsch who will no doubt advise about them when his work on this group is published.

We were fortunate in having the deep submarine canyon running off of Redondo Beach. One of the easiest ways to be sure of getting a good haul was to check the chart and run off the edge of the canyon into possibly 300 fathom water, then drop the dredge down as deep as you wish but short of the bottom and simply start the boat and run for the bank which would probably be not over 50 fathoms. In draging the dredge up the side of the canyon we invariably got a fine haul BUT with one very serious drawback. We tried to keep all of our material with very accurate bathymetric ranges. Obviously in any such a manuever as this we would have no idea

whether we picked up a shell in that haul at 100 fathoms or 50 fathoms.

Some of the toughest dredging I ever tackled though was on the shale bed off Monterey, California. The bottom here running from the beach off Del Monte down to around 40 fathoms is shale and rock. The result is that a dredge is hardly down until it is caught. To attempt to free it by running back over it or anything else is simply an exasperation. We found the only thing to do to really collect in quantity was to tear up strips of the shale bottom rocks and all. I remember one of our first trips up there. We were met by three local shell enthusiasts and friends of ours and they all had dredges of their own as I recall 10 dredges in all and each with the fond and almost motherly care and work of the owner and involving almost every type known to dredgers. And we took along I think seven dredges of our own. We worked three days and at the end of the third the one and only remaining dredge had the heavy hardwire cloth sides simply cut to ribbons. The idea was simply this. When the dredge got caught and stopped the boat, to simply stop pull in some slack and open the engine wide open. The yank at the end of the slack did one of several things, it either lost the dredge, tore it all to pieces, OR it brought up a big chunk of rock covered with shells and what not. The success of this proceedure even though tough on dredges may be simply stated when I mention that at the end of that third day we had over 300 fine living *Pterynotus carpenteri*, several *Hemitoma bella* and simply countless Ocenebras, Calliostomas and many other things that kept us busy for weeks afterwards. We averaged about 400 lbs. of good dredgings which is not bad in any dredgers club.

The difficulty in getting some of the things we always wanted badly is still a puzzle. For an example off Redondo Beach we would bring in hauls composed of hundreds of recently dead valves of our quite rare *Pecten diegensis* , aadult shells averaging 4 to 5 inches. In with these we would bring up quite commonly smaller living specimens averaging the size of a dollar or a little more but rare indeed did we get a living big one although we knew they were there. We concluded that this mollusk is simply active enough to swim out of or out of the way of the dredge or trawl.

At certain seasons of the year we had another problem to contend with in the heavy growth of the marine algae. Our favorite spot for dredging always with success was what we called the gravel bed. This ran from about 25 fathoms on out to possibly 40 fathoms and the bottom was simply ideal in that it was composed of stones but few of them larger than a man's fist. The result was that it was a simple matter to bring up a dredge full of these rocks, and in them was a rich fauna of shells. We took several new species from this locality. Incidentally these stones were rich with deep water chitons and interesting in every way. But to return to my first thought, at times the algae would get so heavy over this gravel that an ordinary piece of our gear would simply slide along over and through this heavy algae (composed largely of Acrosorium) and never get to the gravel. We found that a dredge with a circular opening and plenty of weight in front of it would cut on through and get some of our stones for us.

Incidentally, that last comment is possibly the most important made in this rambling note. More dredgers have failed because of their reluctance to hang a really heavy log chain on the front of the dredge bridle than for any other reason. It is impossible to dredge unless you get the dredge on the bottom and keep it there.

Of course, cable is the thing to use in any kind of deep water work, but some very fine things can be brought up by the use of a small boat and rope line with the limitation that when you start to get below 50 fathoms you have almost a boat full of rope. The drum on the winch I have now conatins 7,200 ft. of good wire cable. It takes up no more room than one spool of ½" manila rope. Now a tip on using this rope may be in order. Rope is almost unbelievably bouyant. To really get it down is your problem. We used to take a box of the small window weights, the ones about 4 or 5 inches long and fasten one of these to the rope about every 50 ft. after getting it started down. And we always used a good piece of heavy chain just ahead of the dredge bridle.

And there is still so much to know about dredging that still puzzles me. Among the many worries for example are the things that you know are there and can't get. Dead valves of our very rare Anatina for example are not uncommon and while I have brought up broken valves (it is very fragile) I have never brought up a living shell. No dredge I ever used could cut deeper than a few inches and I assume that those things are simply a bit too deep for us. And the extremely delicate things always annoyed me. Solenya for an example. We dredged thousands of those and think we managed to get two or three decent living specimens of adults, quite a few juveniles. We brought them up in pieces, Other fine things that we dredged with an average of 99% of them smashed in the dredge are Cyathodonta undulata,Periploma discus etc.

I hope that this note will start a little round table discussion of the subject of dredging. Let's hear some of the experiences of some of the others and I will try to recall some more experiences on other occasions. John Q. Burch

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The dredging of the San Pedro Harbor has been the source of some great days for some of the members of the club. The material thrown up on the beaches by the dredge pipes has been rather rich in some good species. Reallt good specimens have been brought in to me of Cancellaria cooperi, Megasurcula carpenter and Pterynotus santarosanus as well as many other rather rare local species. Some of the species I listed as Latiaxis costata hindsii (Carpenter) were brought in. The correct name for this species is still a matter of discussion. My idea was that certainly our shells bear no resemblance whatever to the true Coralliophilas of the coral reefs of the Pacific. An examination of the genotype Coralliophila violacea (Kiener) (C. neritoidea) would be sufficient ground to place these shells in another genus at one glance. Whether that genus should be Latiaxis or as I suspect in another genus of their own is another problem. But still another point to consider is the fact that our shells are not associated with true coral but with in my experience the coralline Bryozoa, Diaperia pacifica Idomea californica etc. In a recent personal communication on this matter Dr. J. Wyatt Durham, University of California, Berkeley,Calif. points out that there is a vast difference between the coraline Bryozoa and true corals, being in entirely different phyla. It seems that such an abrupt change in habits from one geographic region to another should be carefully considered.

In regard to the specific name though there is still more confusion. The name listed generally for our local species is Coralliophila oldroydi Oldroyd. After studying all of the figures and data that I could find I concluded as a personal opinion in

which I may well be alone that our shell is hindsii of Carpenter and that hindsii in turn is a questionable subspecies of the older costata Blainville. However, while I have dredged hundreds of the local Southern California shell there seems to be a great dearth of material of the species from Magdalena Bay and farther south. In the first place a great deal more material of the southern shells should be compared with ours, and in the next place I would consider it very important indeed to verify the habitat of the southern members of this group. In other words is the host true coral or not. If it should be proven that the siuthern species are only associated with true coral as has been suggested while our Southern California shell is not, then that would be an indication to me at least that our shell is indeed a different species and perhaps in that case the name oldroydi Oldroyd should stand.

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Frank B. Saunders, 1804 South Bay Front, P.O. Box 551, , Balboa Island, California. is the latest addition to our group. They have been collecting in the Gulf of California and have many very fine shells to show for their interest. " We are leaving for the upper Gulf of Mexico in our boat on or about the fifteenth of November. The name of our boat is Joannea III.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA Aug.3,1948 E.P. Chace in the chair. Mrs. Gillis on vacation. 22 present. Package here to be sent to the Hamburg Museum. Papers mentioned New Nautilus, Check List of Utah Mollusca, So. Calif. Academy of Science Bulletin. Reports on collecting in the dredgings now being dumped on Cabrillo Beach- Petricolas from kelp at Redondo Beach steam plant. Dr. Gregg reported that his committee has given serious thought to obtaining help for Mr. Burch in issuing the Minutes. Several members have been making themselves available If a little more material can be sent in and at least as much man power furnished regularly it should be possible to keep the Minutes going.

The program was by A.M. Strong on Turridae, a report on five expeditions which have dredged the coast.

Mr. and Mrs. McGowan were welcomed later.

A few notes from Mr. Strong's interesting talk. Bartsch has given us some new genera for northern turrids but has not distributed the species among the genera. The California Academy has not tried to work up anything from north of Monterey or below 100 fathoms. Reeve gives but three genera in this family. The Cal. Academy has 400 species. Woodring's Bowden Fauna was discussed. Some of his genera have persisted on the Pacific Coast only, some in the West Indies only. It was a most interesting discussion which Mr. Strong called a progress report and consequently subject to change so no attempt has been made to incorporate any names in this report.

Elsie Chace- Secretary Pro-Tem.

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SOME NEW PUBLICATIONS RECEIVED

Proceedings of the California Academy of Sciences- Vol. XXVI No.4 pp. 69-99 " Notes on Land and Freshwater Mollusks of Chekiang Province,China." 30 pp, 1 pl. 10 figs. 1 text fig.by Teng-Chien Yen.

Same as above- No.6 pp 1250133 " New Fossil Cypraeidae from the Miocene of Florida and Colombia" 1 plate.

In addition to the above the California Academy has delivered 9 other papers- Parts 8,9,10,11 " ... Insect Fauna of Lower Calif." Two papers on fish, one on mice, one on Hydromedusae.

Proceedings of the U.S. National Museum Vol. 98, No. 3222,1948 " A Potential Snail Host of Oriental Schistosomiasis in North America (Pomatiopsis lapidaria)" 12 pages 1 plate.

Nautilus, Vol. 62, No.1, July,1948/ Several of the papers in this issue pertain to this coast particularly. " Aquatic Pulmonates from Lake Tahoe " by Henry van der Schalie and Elmer G. Berry; " Mollusca of the eastern basin of the Chaco River, New Mexico" by Robert J. Drake; " Terraria observations on Prophysaon andersoni(J.G. Cooper)" by William Marcus Ingram; " Notes on the foreign snails of Louisiana" by Harold W. Harry; " Current Interest in Malacology" by Ralph W. Dexter; " Indiscriminate scattering of exotic mollusks" by G.D. Hanna; " The spread and destructiveness of the giant African snail, Achatina fulica Fer." by R. Tucker Abbott

Bulletin of the University of Utah. Biological Series Vol. XI, No.1. " Check List of Recent Utah Mollusca" by Ralph V. Chamberlain and Ernest J. Roscoe.

Michigan Department of Conservation- Misc. Publ. No.4, March,1948 " The Commercially Valuable Mussels of the Grand River in Michigan" by Henry van der Schalie. This is quite a booklet with 17 plates maps and discussion.

State of Washington, Department of Fisheries, - We receive two Bulletins frequently- one from the state Shellfish Laboratory, Gig Harbor and one from the Oyster Laboratory, Ocean Park,Wash.

Of course, most of these weekly bulletins are devoted entirely to the setting etc. of the various oyster localities but some of them occasionally contain interesting notes to the conchologist. The frequent discussions of the Native Oyster is of interest.

The first I had ever heard of cultching with metal is in the July 28, Ser. VII, No.6. It is the use of scrap metal from tin manufacturers. In making tin containers the manufacturer stamps out the tops and bottoms and sides from sheets of rolled steel. The oyster growers have been buying this sheet steel left over and using it in the oyster beds. The obvious feature is that the steel will rust within two years thereby eliminating breaking-up operations.

The Auckland Museum Conchology Club- The mimeographed reports from this club are very interesting and add to all information available in the published volumes. The latest received are " The Genus Verconella" notes from a lecture by Mr. A.W.B. Powell, 20 May, 1948. " Amphineura"- Chitons- from a lecture by Mr. Powell 17, June 1948. " Other recent papers are " Placostylus" by W.W. Gardner; " Notes on Brachiopods" by E.N. Houghton; " A Trip to Mt. Maunganui" by J.R. Walker.

Our New Zealand cousins obviously have a very fine and enthusiastic club and are doing serious work.

Jim and Edna Msrsh had an interesting show at their home May 29,30, 31. A neatly printed program of 12 pages and cover was given out. 7436 Conchological Specimens Representing 32 Countries.

Fisheries Newletter-Australia June 1948. Several articles on oysters but one of particular interest is continued " Oyster Culture in Japan"

While they are not recent papers we are pleased to add to our library a number of articles from the Paleontological Society of Japan and the Biogeographical Society of Japan by Katora M. Hatai.

We are also pleased to receive a number of fine papers from the author, A. Bloklander of the Netherlands.

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Dr. G. Dallas Hanna , California Academy of Sciences, Golden Gate Park, San Francisco. We have an interesting personal letter from Dr. Hanna regarding his Conus paper which is coming out very soon we hope and also the long heralded Monterey paper.
W.G. Paris, Boom, Tenn. Mr. Paris writed that he has torn down his house and is building a new home. In the meantime his shells are all packed away in boxes and conchology must wait the completion of the new domicile.
Wayne T. Montgomery, 6436 N.W. 1st Place, Miami, Florida. Mr. Montgomery has sent out another list of rare Florida Liguus. Those interested in this genus should get it.
Mr. and Mrs. E.P. Baker, 11619 S. Downey Ave., Downey, Calif. We were indeed sorry to have to miss the annual " Watermelon Party" of the Long Beach Shell Club held at the Bakers. This has become an institution. We have an entire column in the newspaper regarding the event. There were 40 members present. Mr. H. Arden Edwards of the Southwest Museum gave a talk on Ethnoconchology which was certain to have been of interest. Shell games were played, prizes given and a good time reported by all.

A personal note from Ned too " ...Vacation and camp only 2 weeks away so may not make it to get over to see you. Had a great day with the shell club. You and Rose were missed. Wish you had been with us as usual. I enclose a clipping telling of the fun we had. A letter from Effie Clark the other day says she and " Eve" went fossil hunting and got shells she had never had before. He helped her with a shell cabinet. She is lonesome for the shell club.
How about having some more letter heads and envelopes printed ? I am about out. "

* Note* I will make an inquiry as to the present cost of having some stationary printed. If any of the members know of any short cut will be glad to hear of it. Most of the printing I have had done in the past year or two reminds me of a trip I made down to Todos Santos Bay once with Slim Connolly. We went out on the pier to dicker about renting a boat to do some dredging from and when the Mexican boat ownerstated his price for the day, Slim hastily cut in " Oh No- you misunderstood us. We just wanted to rent the boat, not buy it".
Mrs. Lida B. White, 4301 Belle Vista Dr., St. Petersburg Beach,Fla. We were pleased to hear from Mrs. White whose energy simply amazes us. It is a jaunt to make the staunchest of the youngsters stop and think to drive a car from Florida across the continent and down the West Coast of Mexico to Guaymas, collect a car load of shells, then cover California, return, and the next we hear " I returned from a nine weeks trip down the E . Coast Keys ". " My 9 year old grandson is a good shell hunter and a good travelling companion. The details of collecting the Liguus are interesting. " Snakes and tree snails like the same community. I wore overalls, high boots,cotton work gloves and my precious and ever present sun bonnet..."Speaking about my age. Remember my telling you of dancing with an Indian on my 68th birthday at a Pow Wow in S. Dakota. Well his picture was in the last issue of Life. I feel almost famous."

NEW SHELL BOOKS

Mr. Walter F. Webb has announced three new books. We will be pleased to have you send your order for any of these to John Q. Burch 4206 Halldale, Los Angeles 37, Calif.

Webb's Handbook for Shell Collectors. To be ready about Oct.1, now in press. There will be 41 new half tones, illustrating 30 varieties of Murex, 241 varieties of Conus, 51 varieties of Voluta, 131 species of Cypraea which were not in the last edition. $5.00

Foreign Land Shells . An entirely new book. $5.00

United States Mollusca 220pp, 63 plates illustrating about 1400 specimens. $5.00

Achatina fulica (Fer.) This is one of the most talked about and written about species of mollusk. The destruction caused by these huge snails is fabulous, and they are even occasionally getting into California although I think that our state officers have prevented them from getting really started.

Those interested may have good specimens of this species for 75¢ from John Q. Burch, 4206 Halldale, Los Angeles.

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Mrs. R.G. Beck, 210 W. 2nd St., Escondido, Calif. has some very nice Florida shells personally collected and in duplicate. Some of them are quite rare shells. They would like to exchange them for other shells new to their collection.

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We recently purchased some small boxes made from transparent plastic. They measure 3½" x 3" x 1" and come ready filled with good white cotton ready for the shells. The lid slips down on the tray making it a matter of seconds to mount a set of small shells. We will be pleased to send some of these to those who may be interested for 15¢ each. John Q. Burch, 4206 Halldale, Los Angeles

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A few interesting books- your orders for any of these will be given prompt attention if sent to John Q. Burch

The Mysterious Sea by Ferdinand C. Lane. Filled with a thousand believe-it-or-not facts, here is a book which tells the average reader everything he could possibly want to know about the sea. There are chapters on How the Seas Began; The Romance of Soundings; Rivers in the Sea; Where Life Began; The Regions of Darkness and Strange Light; Argonauts Ancient and Modern; The Romance of Charts; and Strange Islands. $3.00

Animals Alive. by Austin H. Clark just published 1948. Out of a lifetime of study, and with a reputation that has become world-wide, Dr. Clark has surveyed the whole field of insects, birds, mammals, fish, worms, mollusks, and other creatures and in these pages, compounded of a high order of natural history and of an endless array of incredible facts and tales of strange animals, has set down a masterpiece of its kind. Animals range higher (above the highest mountain peaks) and lower (four miles, in the ocean depths, living on the drift of dead sea plants) than vegetation; they go through magical mutations (like the various lives of many insects); they exist in stranger forms, from the inch-wide eighty foot tropi--cal sea worms, through the vast vertebrates of land and ocean, to the minute water animals. $4.00

MINUTES 83
SEPTEMBER 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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The following personal communication dated 24th August,1948 from the Hon. Francis Hemming,secretary of the International Commission on Zoological Nomenclature will be of interest.

The meaning of publication

We had some correspondence in 1945 about the question of the meaning to be attached to the expression " divulgue' dans une publication" as used in proviso (a) to Article 25 of the Regles Internationales de la Nomenclature Zoologique.

At that time I informed you that although this question was one which had been under consideration by the Commission for a long time no definite ruling had been given.

I am pleased to be able to tell you that the Commission took up this important matter at its recent meeting in Paris, held in conjunction with the International Congress of Zoology. The full record of the decisions reached will be published as soon as possible in the Official Record of the Paris meetings which will come out in a forthcoming issue of the Bulletin of Zoological Nomenclature. In the meantime I enclose for your information an extract

from the proposals submitted to the Commission on this question, which were substantially adopted by the Commission and subsequently by the Congress. ...

The meaning of " divulgue' dans une publication"

(Extract from porposals submitted to, and considered by, the International Commission on Zoological Nomenclature at their meeting held in Paris, July 1948)

(1) that a name made public prior to midnight G.M.T. 31st December, 1950 is to be deemed to have been " divulgue dans une publication" only if it complies with both of the following conditions:

(a) it must be included in a document reproduced either by printing or by some other mechanical method of reproduction which secures that every copy is identical with every other copy;

(b) the document in which the name is included must be a document issued for the purposes of record and therefore of consultation by interested persons, and must accordingly not be a document issued for exclusive consideration by special persons, or for particular purposes or for only a limited time;

(2) that, in order to be deemed to have been " divulgue' dans une publication", any name made public after the point of time specified in (1) above must comply with all of the following conditions:-

(a) it must have been made public in conditions which satisfy the requirements of (a) and (b) in (1) above.

(b) the document containing the new name must be reproduced on paper, and with ink of quality and durability sufficient to offer a reasonable prospect of permanency.

(c) where a document is distributed by (or on behalf of) its author to certain selected persons, at least some copies must also be placed on sale or made available for issue free of charge to any institution or person who may apply for a copy;

(3) that a Recommendation be added to the relevant portion of Article 25, urging institutions and individuals responsible for the publication of works and papers containing new names to secure that there appears in the work or the part of the work or journal comprising papers containing such names a clear statement:

(a) of the name of the institution or individual responsible for publishing the work or journal concerned;

(b) of the address from which the work or journal may be purchased;

(c) of the price for which a copy may be obtained;

(con.)

(4) that the mandatory provisions to be added to the Regles to give effect to the recommendations submitted in (1) and (2) above should specify also that none of the undermentioned types of action constitutes publication:-

(a) the anonymous issue, or the issue over initials only, of a work or paper after 31st December,1950) see Point No.(25) of the present paper);

(b) the deposit of a document, however reproduced, in a public library or in the library of a scientific institution;

(c) the distribution of printer's proof sheets (See Point No.(15) in Paper I.C. (48) (11);

(d) the presentation of a paper before a meeting of any kind;

(e) the distribution of separata (pre-prints,off-prints etc) in advance of the appearance of the paper in question in the journal, for inclusion in which it was printed (see Point No. 17) in Paper L.C. (48)11;

(f) the affixing of labels or tags on museum specimens;

(5) that the recommendation regarding the languages in which alone new systematic units should be proposed should be removed from its present position in Section A of the Appendix and, for greater prominence, inserted as a Recommendation to Article 25.

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THE AMERICAN MALACOLOGICAL UNION

We have received a number of reports about the proceedings of the meeting in Pittsburgh, but the details of the meeting will be left to the official report by Mrs. Robertson.

However, one thing of importance to us may be mentioned by quoting from a personal letter of Dr. A. Myra Keen as follows:" You may report in the Minutes, without infringing on Mrs. Robertson's prerogatives, I think, that the Pacific Division of the A.M.U. was approved both by the council and by the membership at the open meeting. We are, therefore, now established. Exact details of organization will be given in Mrs. Robertson's report. In the open meeting one member moved and the motion was carried that the chairman of the A.M.U.P. be automatically a second vice-president of the A.M.U. This is more than we would have dreamed of asking, but I think we will be pleased at the recognition. The motion,however, is provisional, depending upon whether such a proceedure will conflict with the by-laws of the A.M.U. Mrs. Robertson will rule upon this later. She was, unfortunately, unable to attend due to the illness of her husband."

There were only three people from west of the Mississippi: Dorothea Franzen, Ruth Coats, and Dr. A. Myra Keen. The total enrollment was about thirty five, but the meeting was held in the middle of the heat wave with the daily and nightly temperatures in the high nineties.

" Ruth Coats is coming down soon to confer with Dr. Hertlein and to begin considering probabilities for our next AMUP meeting."

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A CONCHOLOGICAL PRANKSTER By W.O. Gregg

Some years ago there was in Los Angeles a certain character who became interested in collecting mollusks. Having an independent income, he was able to devote his entire time to the matter, and in a few years he was able to build up a fine collection and accumulate a fine library on Mollusca. He collected extensively exchanged and also purchased shells. When he was not busy at home working on his collection, he was off on another collecting trip. It would not be polite to mention his real name so we will refer hereafter to him as Mr. A.B. Well, Mr. A.B. had no idea of scientifically cooperating with zoogeographers but was rather impressed with the thought of playing pranks on them.

I find in my file a letter from A.B. dated May 9,1932 and will quote the last paragraph. " Incidentally about a year ago I sent a large lot of live California snails to Isfahan,Persia, 134 live _traski_ and _tudiculata,_ besides several each of several other species, to a missionary there. He wrote later that they were all doing fine. When he leaves there and probably abandons most of them,some shell hunter is certainly going to scratch his head when trying to identify them. Have sent lots to Europe, New Zealand, and Australia. As these imported and exported shells (especially land) always in time develop some different characters due to new environment, food,climate etc. there will probably be a lot to be written about them after we are all dead and gone."

A few days later in a phone conversation with A.B. he mentioned collecting numerous specimens of Helminthoglypta umbilicata (Pils.) near Atascadero,San Luis Obispo Co. He said he took all the immature ones he could find and later turned the young ones loose at a moist place by the roadside several miles north of Ensenada, Lower California.

In April,1940, Mr. and Mrs. E.P. Chace invited me to accompany them on a collecting trip to the vicinity of Ensenada. As we approached Ensenada, they were watching for a particular spot by the roadside which we eventually found. After half hour's hunting and unable to find any snails there, Mrs. Chace finally said," I will let you in on a secret. We were going to have a surprise for you. There doesn't seem to be any snails left here and I am certain that this is the place where a few months ago we found specimens of Helminthoglypta umbilicata which were seemingly identical with those we collected in San Luis Obispo County." The long jump in range was something they just could not understand, With all this in mind I renewed my efforts. The finding of bones would have indicated a long established colony. There were no bones. The Chaces had exterminated Mr. A.B.'s colony on their earlier collecting trip. Though snails (as well as other animals) may mature in a new habitat, if that habitat is not favorable, they will not propogate. I told Mr. and Mrs. Chace of A.B.'s activities, a donkey across the canyon brayed loudly, and we drove away in disgust.

Dr. Hanna will be pleased to know that A.B.'s conchological activities have ceased entirely. The depression caught up with him suddenly and he gave up his hobby. In June,1932, his collection was offered for sale and promptly purchased by one of the local collectors who was still in the chips.

When Dr. Hanna compiles his list of varmints which should be exterminated, I respectfully suggest that he add another species, *Prankster conchologicus.*

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THE CHACE'S 1948 VACATION TRIP

Elsie M. Chace

E.P. and I left here June 22nd, turned off the Ridge Route to Frazier Mountain Park. George Willett had had something interesting from up in therebut Emory and I didn't find it. For one thing there had been a fire up on that mountain (careless cigarette if I remember correctly) and Chuchupate Camp is very sad. They are salvaging the fire killed timber as much as possible, but the road up to the camp is not as good as it used to be and there are definitely no snails up there now. Along one of the side roads we took we found a race of *Helminthoglypta traski* which is certainly not typical, and further deponent sayeth not. I believe *traski* is nearly as bad about local races as *Monadenia fidelis* and that is saying a lot.

Next day we hit for Riverbank where an old friend and casual collector is now living. Emory raided the brush along the Stanislaud River and got a good set of *H. allyniana* Berry away from the mosquitoes, also a few slugs. Page Dr. Gregg.

The next collecting was near the old quarry just outside of Columbia. This was the source of the marble used in the Ferry Building at San Francisco,but what was being taken out this year I understood was being burned for lime. *Monadenia mormonum* Pfr. *H. cypraeophila* Newcomb , some *Succinea* in a trickle of waste water from the quarry. Collected one big green slug, apparently the same thing we have seen elsewhere in the Sierras without being able to get a name for it. One discussion I saw called it simply a form of *Ariolimax columbiana.* It may be but I have never seen the green form on the coast,nor the yellow and spotted forms in the Sierras. Also the green one never looks as long and slender when crawling as does the coast or redwood dwelling beast. Unfortunately there was too much hot weather between this collecting and our return so Dr. Gregg not only got no live slug but the remains were past use. He was nearly as disgusted as I was.

A quick trip from Columbia to Tuolumne City finally brought us to a pretty creek, but no sign of snails nor good camping place so we crossed that off the places to look for *M. circumcarinata* and turned back toward the Yosemite road. Instead of going clear back to Yosemite Junction we took a secondary road across the base of the triangle, and near one of the little creeks found a few specimens of *H. allyniana* larger and thinner.than those we took near Waterford several years ago. In fact most of those that we took on this trip ran to the large type underscoring the fact that *H. allyniana* seems to be just about half way between *tudiculata* and *cypraeophila.*

That days trip took us over " Priest Grade", 160 turns in 7 miles, more annoying than dangerous especially as it was really warm. After leaving Groveland we got into more timbered country, and stopping beside various creeks wherever it looked like snail country we turned up *M. mormonum* and either *H. cypraeophila* or *allyniana* . The *mormonum* do not look all the same but in view of Dr. Pilsbry's remark in the Manual (1939) " there are shells of intermediate characters and *cala* (*M. mormonum cala*) is probably a superflous name", I see no point in trying to separate them. We turned off the main highway on a road signed

" Bowers Cave" figuring that meant limestone country and perhaps snails. After our fair share of annoyances we found that sometime back Bower's Cave and the old ranch house whence its owners had guided visitors for 75 years had been purchased by the Veteran's Administration for a readjustment or recuperation center and closed to the public. One group had been sent there and after their return it had been closed. Needless to say we got nothing there but a sample from a nearby creek bed was of the usual pattern. The following day found us crossing the Stanislaus National Forest and being a little higher than at previous collectings. We hot H. napaea along with M. mormonum. H. napaea has an interestingly long range- from Ockenden,Fresno Co. to above Placerville, Eldorado Co. but seems to like 4000 ft. elevation or more. In some places it seems to be a burrower, in others I have found it in rotten logs. In 1918 Emery collected M. hillebrandi about the spot which later became the type locality of H. napaea yosemitensis, but on this trip, in spite of careful observance of the rules about permits etc. he had no luck in the Valley. M. mormonum goes inside the boundary of the park but not, so far as we can find, into the Valley proper. On the other side of the Valley over near Mariposa Big Trees a marshy place yielded H. proles mariposa and a Trilobopsis probably sierrana Berry- although oria intervenes between this locality and Weed where the original sierrana was found. That wound up our shell trip. We didn't try to fish- just as well- as the general report was " The fish in here are smarter than the fishermen". We are not competent botanists but did enjoy seeing a few belated snowplahts, and an introduction to the single flowered redwood lily (Clintonia uniflora). Seeing the flower alone I should never have placed it beside its Del Norte County brother as one is white and only one on a stalk while the other is red and has a whole cluster of bells, but the plants suggest each other, much as some of our Murices sometimes have almost undefinable but quite inescapable resemblances.

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The Chaces have again been on the air the " Harbor District Forum of the Air" KGER 6;05 to 6:30 Sunday evenings. And their shell talks have been of such interest that they are being urged to be on a television program.

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Pismo Clams- Tivela stultorum Mawe. We have been enjoying huge shipments of this great delicacy shipped up from Mexico. However, the Los Angeles Times of July 17,1948 carried a photograph of one of the last shipments from Mexico in the shell. " Future shipments will come " undressed" following Mexican ban on shipping shellfish". A few of us still can ' date' ourselves by recalling the good old days when a party leaving on a shell collecting trip up the coast simply took for granted that they would enjoy numeraous meals of fine fried Pismos.

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Mackenzie Gordon Jr., 1673 Columbia Road,Washington 9, D.C. It has been a long time since we last heard from Mac and his recent letter was very welcome. " I have been back from Brazil now for about a year and have been working on a paper on the Stratigraphy of South Brazil, and another on the wartime exploration work in the Arkansas bauxite region. They are both long and move rather slowly. On Saturday I have been getting over to the National Museum and working on the Fusinus paper. It is about

85 percent complete now and I plan to finish it about the end of the year with Allyn Smith in San Francisco.

At long last the Monterey paper is moving. I heard recently from Doc Hanna that we could expect galley proof before very much longer."

NEW PUBLICATIONS RECEIVED

The Mollusca of the Niagra Frontier Region by Imogene C.S. Robertson and Clifford L. Blakeslee. Bulletin of the Buffalo Society of Natural Sciences. Vol. 19, No.3, 1948. The book contains 191 pages, 6 illustrations and 14 plates. Paper bound $3.50

The systematic account of the species consists not only of a description of each species but an account of the distribution, a list of collecting sites and many other careful details.

It may be purchased from the Buffalo Museum or you may send your order for it to the editor of the Minutes.

A Zoogeographical Study of the Land Snails of Ontario by John Oughton. University of Toronto Studies- Biological Series No. 57.

This valuable and interesting book in 128 pages involves a format that seems to be new to the editor here at least. Every species is accompanied by a map on which is indicated the range of the species being discussed. There are 89 of these and in the back of the book are charts of interesting data- distributional records, a census of the various land snails, and one chart that is very unusual in that it gives accurate data on the Rate of Locomotion of a number of snails. A few of them are veritable track starts compared to others.

Nutrition and Sexuality in Protandric Gastropods of the Genus Crepidula by Wesley R. Coe. Biological Bulletin April,1948.

Variations in the expression of sexuality in the normally protandric gastropod Crepidula plana Say. J. Exp. Zool. v. 108, no.1, June 1948 pp 155-170.

Mollusca- Vol. 2 No.3, June 1,1948. Published by Paul H. Reed, Tavares,Florida. This is a very fine issue in 30 pages and one plate. Three articles of interest are The Pioneer Bahama Expedition-May,June 1947 By Paul L. and Thomas McGinty; A Report on the Mollusca Collected by the Pioneer Bahama Expedition By Thomas L. McGinty; and Some New West Indian Shells By A. Hyatt Verrill.

Shell Notes By Frank Lyman, Lantana,Florida. In this issue Frank has some very excellent figures of some very rare reef shells. Anyway they are rare to me and I flatter myself that I have seen my share. I have never even seen four of the species figured. Impressions of Reef Life by Cyril E. Abbott is an interesting paper. Frank is offering a set of three in a growth series of Coralliophila abbreviata for a mere $10.00. He must have discovered some easy method of collecting these deep water shells to be able to offer them at such a price. My experience was to lose $10 worth of equipment for every Coralliophila taken.

Catalogo De Los Moluscos De Cuba By Carlos Guillermo Aguayo and Miguel L. Jaume. The last installment we have received of this valuable work brings it through page 400. It is assuming size both literally as well as in value to the student. Every library should subscribe to this work.

Verrassende Vondsten In Schelpgruis Van Texel By P. Kaas De Levende Natuur Vol.51, pt.6,June,1948. This well written paper is of some particular interest to some of us at this time because of his use and discussion of some of the Turrid genera, and in particular of Lora Gistel 1848. His key to Alvania Risso 1826 is also interesting in its method.

Danmarks Akvarium,Charlottenlund,Denmark,1948. This little booklet sent us by Mr. Georg Mandahl-Barth of the institution is in English and gives the arrangement and work of this fine aquarium.

Auckland,New Zealand Conchology Club- The last of their bulletins at hand is for the meeting of July 15,1948 " Notes on the Nautilus" a lecture by Mr. A.E. Brookes.

Shells and Shell Collecting is the title of a new book just announced by the Long Beach Shell Club. It is to be mimeographed and bound by the University of Southern California, and the papers are by members and friends of the club. They are asking for advance orders. The price is $1.00 and should be sent to Mrs. R. Bormann, 4331 Vermont St.,Long Beach 14, Calif.

When it is ready for delivery we plan to give a review and the table of contents.

Further Proof That Sphaerium Occidentale Does Not Attain Full Growth in One Year By H.B. Herrington. The Canadian Naturalist March-April,1948.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- Sept.

After following the rope around the lower regions of the Los Angeles County Museum, twenty-six members of the Conchological Club of Southern California were called to order by our president. The minutes of the August meeting having already appeared in print were not read, but were approved. There were no committee reports although a dictophone would have recorded many interesting side remarks. Mr. Burch reports wonderful help in getting out the Minutes from Mr. Chace and the Mayhews our new members. Dr. Berry was unable to come and Mr. Chace pinch-hit for him in a way that was both interesting and profitable for us. His subject was Muricidae and he showed many interesting shells. He spoke of the growth periods as probably being of short duration while the rest periods after forming a new varix were a long time for strengthening the shell and storing up new material for further building. The change of locale was discussed bringing out the point that grease and sewage has driven many shells away from their former habitat. The club will meet in its usual room next month. Respectfully submitted HarrietteGillis

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Homer V. Geib, Palm Beach,Florida. We were pleasantly surprised a few days ago by a visit from Mr. Geib, an old friend from his war days spent in southern California.

Dr. L.K. Darbaker, Emlenton,Pa. Am spending some time here along the Allegheny River, 20 miles south of Oil City, in the foothills of the beautiful Alleghenies. The Malacological meeting was small but enthusiastic. It was nice to meet some big shell people. I had hoped you might be there.

Dr. Fritz Haas, Chicago Natural History Museum, Roosevelt Road and Field Dr., Chicago 5, Ill. " Some days ago I returned to Chicago from a three months trip to Bermuda, where we were busy in deep sea research. As far as mollusks are concerned, we did not collect much, since most of our work was done in the bathypelagic area, fishes being our chief interest; only once we struck bottom at about 1600 fms., and in the ooze contained in our net, some bottom shells were found, but nothing alive, unfortunately.....It will take quite some time, until I'll be able to do my research work on shells again, for weeks I shall be busy answering letters accumulated during my absence; but what can be done ?".

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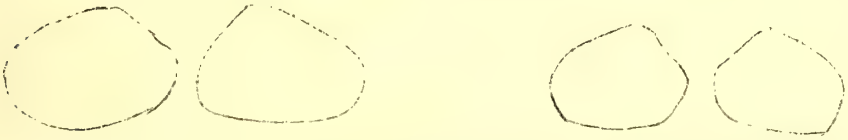
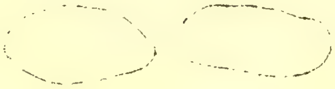
NOTES ON PETRICOLA TELLIMYALIS (CARPENTER) By John Q. Burch

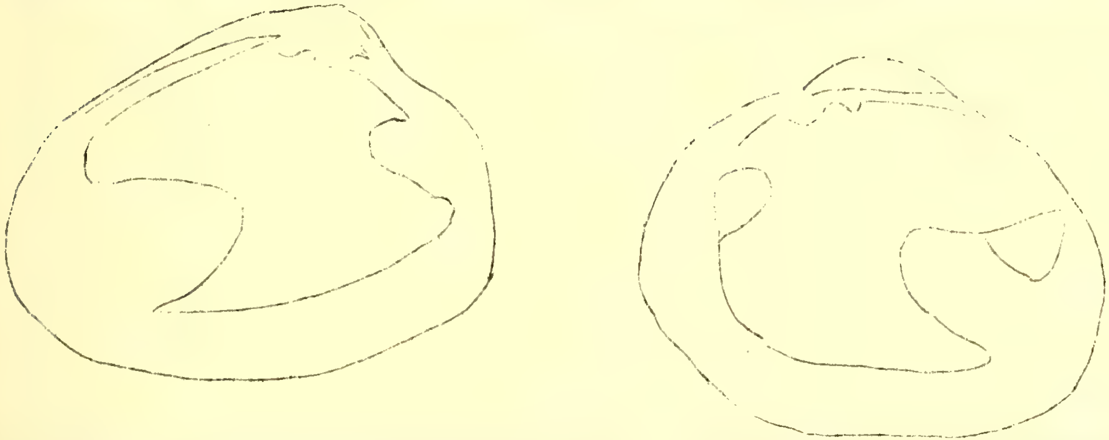
The following comments will be more in the nature of a query and a brief summation of our present knowledge of this species than an assumption that a problem is settled.



Tracings of George Willett's figures Bull.So.Cal.Acad Sci. XXX p 39



Tracings of Willett's figure of Petricola denticulata Sby.,young



Tracings of specimens in the Burch collection from San Martin Id., Mexico collected by Dr. Fred Baker.

Perhaps some of our members will be able to make some additions to the following statement of facts. Dr. Dall in 1900 in Nautilus v. 13 pp.121-122 placed Psephis tellimyalis Carpenter in the synonymy of Petricola denticulata Sowerby without discussion other than two words (larval shell). Mrs. Oldroyd followed Dall as was her custom and omitted the species from her work. All others to my knowledge accepted Dr. Dall's opinion until 1931 when George Willett published a paper in the Bull. of the So. Cal. Acad. of Sciences v. 30 p 39 " Psephis (Petricola) tellimyalis (Cpr.) not the young of Petricola denticulata Sby.". A few quotations from

Willett's paper follow: " A few months ago, while the writer was talking with Dr. W.O. Gregg, the well-known California conchologist, he mentioned having taken undoubted specimens of the young of *Petricola denticulata* and stated that they are very different from the shells that we had been considering the young of that species. A short time later Mr. Stanlet Field informed the writer that he had taken similar specimens and was of the same opinion as Dr. Gregg. Through the courtesy of these two gentlemen, specimens of the young of *Petricola denticulata* were furnished for comparison, and, after a careful study, the conclusion was reached that the two forms compared were entirely distinct and that Carpenter's name *tellimyalis* must again be applied to the shell under discussion.

Petricola tellimyalis is readily distinguishable from the young of *P. denticulata* by its entirely different shape, *denticulata* being much more elongated and not at all triangular. These differences may be easily seen in the appended cut. Plate 17." Tracings from this cut were given above. Figures of Willett's shells as given are twice the natural size.

The following year Pilsbry and Lowe, 1932, Proc. Acad. Nat. Sci. Phila. vol.84 p. 97 accept the name *tellimyalis* and a quotation of a portion of their key to species is in point " Anterior end evenly rounded; pallial sinus broadly rounded at end; shell thin. Shell small, short, with weak sculpture, the height about 70-77 percent of the length".

The writer here is in perfect agreement both with Willett and with Pilsbry and Lowe in regard to the fact that this is a species quite distinct from *P. denticulata* or *P. californiensis* if that is involved. The young of the latter species can be collected by thousands from the pilings along the coast from Santa Monica south, or for that matter we could always get any number of them by taking a little of the fouling growth from the bottom of our boat especially while it was moored off Redondo Beach, Calif. Our experience with *P. tellimyalis* has been to find it associated with fine algae, but perhaps that is not the sole habitat.

However, in conclusion it should be mentioned that the reference given for *Psephis tellimyalis* is Carpenter in B.A. Rep. Moll. W. N. Am. 1864, p. 641. An examination of this reference shows the following: " Psephis tellimyalis n.s. Shape of Tellimya: central tooth minute; outside teeth long." And in Carpenter's table he lists the holotype as being in the Smith. Inst.

Neither Willett nor Pilsbry and Lowe mention having examined the holotype but it is assumed that they did so. In any event there seems to be little object in labelling the elongated young of the large southern California *P. denticulata* with the name *P. tellimyalis* because it is quite certain that this small almost triangular shell is either *P. tellimyalis* or a species without a name.

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BETWEEN PACIFIC TIDES By Ricketts and Calvin has been delivered and is very much worth while and a great improvement over the first edition. It makes identification easy featuring a four color frontpiece and one hundred pages of photographs. The many line drawings by Ritchie Lovejoy are particularly helpful for layman and beginner. It is an account of some five hundred invertebrates from Mexico to Alaska. $6.00

Your orderes sent to John Q. Burch, 4206 Halldale Ave., Los Angeles 37, Calif. will receive prompt and personal attention.

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1949 1949
DIRECTORY
OF
CONCHOLOGISTS

Your cooperation is solicited. We wish to make our annual list of persons and institutions interested in the collection or study of mollusks as complete as possible and with as few errors as possible. Former editions have listed many with the most casual of interests.

It has been our custom heretofore to simply mail out the directory on approval to those whom we think it might interest. Next year we propose to mail only to those who have ordered it.

There is not the slightest obligation to order a copy of the directory but in any event we wish to put your correct name and address with your special interests on our list.

We will continue our plan of following each name with the numbers based on the following table, but you are invited to give us your special interests if not fully covered by this table.

1. World Wide Sea Shells
2. Pacific Coast Shells
3. Atlantic Coast Shells
4. Land Shells
5. Fresh Water Shells
6. Buy Shells
7. Sell Shells
8. Exchange Shells
9. Buy Books
10. Field Collecting
11. Marine Life In General
12. Fossil Shells

Order [illegible]

The booklet is announced for delivery in January at $1.50. Those wishing a copy are asked to register and order it now as we plan to print few more than the orders on file.

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37,
California

MINUTES 84
SEPT. 1948
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum,Exposition Park, Los Angeles, California. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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FRESH WATER FAUNA OF CHINA DRY LAKE By W.O. Gregg

Thru the courtesy of Mr. George Kanakoff, Assistant Curator of Paleontology of the Los Angeles County Museum, I recently had opportunity to examine a collection of fossil fresh water mollusks collected at China Dry Lake by Darwin Tiemann. I quote from Mr. Tiemann's letter, " In regards to the Pleistocene shells I sent you via Dr. William Fish. They were all collected in China Dry Lake on the west and south sides. The large bivalves were about three feet deep in the pit where we removed the tusk of the Imperial Elephant. They were near the top of the layer of clayey soil. The soil above consists of gravely sand. The small gastropods and bivalves were collected at a depth of about 2½ feet about four miles south of the Inyo,Kern,San Bernardino county junction just in San Bernardino Co.,this part of the west edge of China Dry Lake. The soil is similar or the same as that in which the large bivalves are imbedded."

(con.)

Examination of the lot revealed the following forms: Anodonta californiensis Lea, Pisidium compressum Prime, Stagnicola palustris nuttalliana (Lea), Stagnicola traskii (Tryon), Fossaria modicella (Say), Gyraulus similaris (Baker), Helisoma subcronatum (Cpr.), Carinifex newberryi (Lea), Parapholax effusa (Lea), Physella ampullacea (Gould), Valvata humeralis californica Pils,

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E.P. Chace- While collecting in Northern California in 1946 we visited a new collecting spot, Haven's Neck, Mendocino Co. and were surprised to meet our old friend Acanthina spirata some hundred miles farther horth than it had been previously recorded.

Allyn G. Smith- This summer, while vacationing at Echo Lake, I visited the outlet at Lake Tahoe where Henry Van der Schalie and Elmer Berry collected a couple of years ago. (See last Nautilus). I found Lymnaea stagnalis wasatchensis (Hemphill) there in great abundance, from young a half inch long to full grown ones. Their egg masses were all over the rocks, water weeds, and themselves in August when I was there. I also took a few Physa, but did not find any Lymnaea bulimoides. However, I did collect the Gyraulus and dead Carinifea and Parapholyx that Van der Schalie and Berry found, but in addition a few Valvata humeralis californica Pilsbry and a single specimen of Anodonta californiensis Lea. This last is the first record from Lake Tahoe known to me.

The locality where these freshwater shells were found cannot be considered an integral part of the Lake Tahoe mollusk fauna, but rather is more nearly equivalent to that of the Truckee River, where the same species and others occur, at least in the upper reaches of the river below the lake outlet. It consists of a rather narrow channel through which the water flows at a rate of 3-5 knots, and which is bordered on the north side by weeds and cattails. The bottom along this side is soft mudand at one spot there is a small embayment where the water weeds are thick and the water warm and stagnant. The big Lymnaeas love this spot. The whole channel is hardly 100 yards long. J.G. Cooper collected here in the old days, and also got Lymnaea stagnalis according to F.C. Baker in the Lymnaeidae of North America. So they have been there for at least 60 or 70 years.

This summer also, on a second try, I think I was finally able to locate Fossil Hill in the Montezuma range (now called Hot Springs Mts.) at the north end of the Carson Sink in Nevada. In the survey of the Fortieth Parallel (1874), King mentioned fresh-water fossils from a lake-bed formation, probably of Miocene age, which were described by Meek in the Proceedings of the Philadelphia Academy. There were supposed to be two species of Goniobasis, a Helisoma, a Vorticifex, an Ancylus, a Pisidium, and a big Sphaerium. I was fortunate to get good material of all but the Pisidium, of which only a single cast was collected, and of the Sphaerium, which is probably a Corbicula that I did not find at all. The Ancylus is actually a good-sized species of Lanx. This is an interesting find, as apparently no one has collected there since the King Survey party discovered this formation. Next year I hope to go there again. Now that I know where Fossil Hill is there will be more of an opportunity to explore the area without spending the time climbbing a dozen or

so hills where the lake bed formation does not outcrop. Also I can drive closer without walking miles in the desert heat, which I wouldn't want to do again- alone.

For the last week or ten days I have been hard at work editing galley proof on the Monterey paper and have turned it in for final page proof, which should be along perhaps next week. I hope to see the paper in print soon. This has been a big job with the little time I have and I shall be glad when it is actually ready for distribution. I only hope it will be of some interest.

Mac writes he will be out here for three weeks toward Christmas, when he hopes to finish the MS on the Fusinidae. It will be something to get this done at least in MS, with photos of all unfigured West Coast species, plus drawings of nuclear whorls of as many species as possible. When a paper like this might be accepted by the Academy is impossible to say now. Doc Hanna's monograph on the West Coast Cones follows ours to press. So this ought to be out this year also.

Am hoping to get back on the chitons before long so you will have another chiton chapter for the Minutes. Just when this will be I can't promise.

There is not much else of interest in the way of news. The A Academy's long expected boat has not been delivered yet but may be at any time now, as soon as the red tape has been unwound. Leo Hertlein is still working on the Crocker-Beebe Expedition shells. Another part of his work, published by the New York Society is long overdue. He is getting the Academy Collection in beautiful shape. Now you can find anything you want quickly merely by consulting a reference list which gives case and drawer numbers by genera. And with the species arranged in alphabetical order under genera, it is easy to locate particular specimens. Ralph Fox took my Danish type dredge to Drake's Bay this summer but had no luck- too much eel grass.

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The Los Angeles Times recently carried an article about another research ship. " Cutter Converted as Research Ship. San Diego Banker to Direct Biological Expedition into Waters off Baja California. San Diego. Conversion of the former Coast Guard cutter Gallatin into a biological research vessel owned by J.W. Sefton Jr, local banker and amateur naturalist, has been completed.. Rechristened the Orca, the 100 foot vessel will leave this winter on a full scale expedition into waters along the Baja California coast. Declared successful was a 14-day shakedown cruise just made to the Channel Islands off the California coast. Aboard were scientists representing four Southern California organizations . Sefton, who organized the J.W. Sefton Foundation for this purpose, said he would devote less time to duties as president of the San Diego Trust and Savings Bank, and lead most of the scientific cruises himself. He is serving his 27th year as president of the San Diego Society of Natural History. During the last quarter century he has directed several overland biological research expeditions into New Mexico, Arizona and Baja California. Special equipment included a winch carrying 4000 feet of steel cable for trolling and dredging, a laboratory, dry and refrigerated storage space, electronic sounding gear and a heavy harpoon gun. Two power launches and eight smaller craft are carried. To entertain residents of isolated villages on the Mexican coast

the vessel has a library of 250 Spanish language musical records which can be broadcast from a powerful loud speaker. " Music wins these people faster than gifts of liquor or cigarettes when we need their help" Sefton explained.

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The new Valero, the vessel of the University of Southern California, Hancock Foundation is also now in the water and being equipped.

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The San Francisco Chronicle of Aug. 22 carried an article " Giant Snails Infest Philippines" Manila,P.I. Aug.21 - When Shakespeare said " the evil that men do lived after them" he might have meant the Japanese. Three and a half years after the end of the Japanese occupation, the giant snails the enemy brought with them continue to infest the Philippine landscape. With no effective method yet devised to combat them,these uncountable snails devour food crops, vegetable plants and fruit trees and make a considerable dent in the nation's economy.

What gives Filipinos additional shivers now is the fact that it is the rainy season. These imported pests, known to science as the Clausilia martensi and the Clausilia yokohamensis, multiply like mad in wet weather."

*** Note *** We wonder where the names of the Clausilia came from in this connection. Some one must have slipped in one on the reporter. Of course, the real pest is Achatina fulica Fer. But since the question is raised does anyone know whether or not some of the smaller species might also have been introduced. But certainly no Clausilia would be of any value as an item of food.

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The San Francisco Chronicle ran the following note recently- date ? ' The Snail Will Prevail' We see that the American Malacological Society (members mull over molluscular matters) is meeting in Pittsburgh, and that proceedings were opened with a little verse called " The Snail Will Prevail".

Certainly the evidence supports the idea of continued prevalence, at least to the extent of survival. At the last count we heard of, there were 60,000 species of mollusk, and that would be quite a few mollusks even if there were only one to a species, which any Saturday gardener will tell you is not the case.

Also, as Bobby Clark once said when told the French nouns are divided into masculine and feminine, it seems only fair--only fair, that is, that mollusks should survive. The slug does not meet our idea of either beauty or utility, but there is reasonable doubt as to how we may correspond to the slug's. The snail has detractors among speed worshipers but admirers in France, even though the gastronome's good wishes to the species is conditioned upon the demise of the individual gastropod.

Live and let live seems a reasonable rule, but it must work both ways. So long as the little verse does not mean that some day learned molluscular societies will turn to anthropology with the peculiar keenness of antiquarians, the man-mollusk situation seems to be satisfactory.

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Mr. and Mrs. E.V. Edmonds - announcet that they have purchased a new home and their friends should now address them at 4665 Benevides Ave., Oakland 2, Calif. The former address was 1933½ Russell St., Berkeley.

California Fish and Game- Vol. 34, No.4, October, 1948. This issue is one that all interested in west coast mollusks will wish to add to their libraries. The editor has written to see what the charge will be for a number of copies for our interested members. The paper of interest is " The Abalones of California" by Paul Bonnot. This paper is in 29 pages - one plate in full color, eight pages of photographic plates and a number of text figures. Most of the species of the coast are figured, discussed for their life histories, commercial methods of collection etc.

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The St. Petersburg,Florida Shell Show- It is certain that all of us, even those of us who have never attended one of the shows and may feel a little guilty for having contributed so little toward the successes of these fine shell shows, will regret their end if this really means the end of them. We have a note from Mr. W.J. Bower as follows: " Forget the shell show. We had to drop it because the city passed a new ordinance levying such high occupational taxes we could not afford to go on. Every human activity pretty near, requires a licence to carry it on, and a fee. Perhaps next year if we can get the ordinance amended."

* Note* In California while not shell shows other shows of a somewhat similar nature for other groups have the custom of *not* selling tickets to their show, but selling membership cards in their club entitling the bearer to attend the show or shows. Apparently this is permitted and seems to be perfectly legal even if it is something of a ' dodge'. Members of a club must certainly have a right to hold a show for the attendance of ' members only'.

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Mrs. Z.W. Craine, 155 North Broad St., Norwich, New York. Mrs. Craine is one of the newer members of our Minutes shell group.

Ernest N. Wilcox, San Luis Obispo . " We had a nice call from the Fletchers on their way north. Their program seems rather ambitious but wonderful if they can carry it out. Charles and Dotothy have been away on a 2 weeks hunting trip in the " Lava Beds" S.E. of Bend, Oregon.."

Jean Demond, Mills College, Oakland, Calif. " I'm afraid I've been neglecting the Shell Club but it is not because I have not wanted to attend the meet8ngs. They sound interesting but I've just been too busy. Last year I completed my work at UCLA and received my B.A. in June. Immediately I left for Honolulu where I spent the summer working at Waikiki. Now having accepted a fellowship in zoology, I am here at Mills working for an M.A."

Sozon Vatikiotis, Tarpon Springs, Florida " I have been a sponge diver in the Gulf of Mexico since 1934, and I want to tell you something about the Voluta *junonia* shell . During the year 1934 to 1944 there were many of them in the Gulf. I gathered them by the hundreds, but since 1944 I have only been able to find two and these were dead shells. In a few years this shell may be extinct. The same thing may happen to the *Cypraea exanthema.* From under each sponge I used to bring up 6 or 7 *Cypraea exanthema* Each hole you put your hand in you would bring some out, but now you can't find them. It is even difficult to find the dead ones."

Joseph S. Gaylord- Address Nov. 1 to May 1- 147 8th Ave.,No. St. Petersburg, Florida

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- .

The October meeting of the Conchological Club of Southern California met at the usual time and place with twenty-one members present. The Minutes of the September meeting were approved as printed.

The president appointed Mr. Caruthers and Mr. Burch as a committee of two to go over the roll and bring the active membership list up to date, according to the by-laws.

Shells are still being sent to the Hamburg Museum for which letters of appreciation have been received.

Mr. Kanakoff reported the finding of a *Helix aspersa* 6 ft. underground in a test shaft being sunk in the La Brea Pits by the Los Angeles Museum.

The speaker of the evening was Dr. Gregg and the subject Land Shells in Southeastern Arizona. He told of his latest trip to Arizona, taken this spring. Considering the long list of shells that are supposed to be found in that locale his trip proved to be more interesting than productive. He had some fine shells to show. Rough roads, incorrect travel information, too dry conditions, all conspired against him. His patience is still intact and he plans to make another trip soon. We wish him luck and hope he will tell us about it and show us many rare land shells.

Respectfully Submitted- Harriette Gillis

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George L. Harrington, Palo Alto, Calif. " About the results of our trip to Puerto Rico,Virgin Islands and Trinidad,there is little to write of a conchological nature. We did a little " beach combing" at Vega Baja,P.R. at Hotel Beach and Megin's Bay,Virgin Islands and Pigeon Pt.,Tobago, getting a number of nice shells, but doing no dredging. On Trinidad, we found no good shell hunting at any of the few places we visited between rains. Besides those places I grabbed " mud" or fine beach sand at a number of places, for forams, with varying luck as to foram content. At Sta. Lucia we dashed over to the beach from the landing field, grabbed a handful of sand as the waves rolled back, and then dashed back to the plane. In spite of the heavy surf, that material contained a number of species, whereas some samples from quieter beaches seem to be barren. Dredged for mud, with a grapefruit can at Tobago and at Port of Spain, with good results at the first , and very barren at the second. The prime place for shell collecting was at Megin's Bay, near Charlotte Amalie, on St. Thomas, Virgin Islands. There was a fair selection on the beach and under rocks, and the sand is rich in forams. That is one place that I would like to be rigged out to do shell collecting by dredging. The beach is fine for swimming and is kept " policed" through the payment of a small (10¢) admittance charge. The cleanest beach of any of those I visited, not excepting the one at Pontchartrain, near New Orleans. (No time between planes to visit any beaches at Miami). Incidentally, the one thing that held us up at Customs in Mobile were my " mud samples", and they also wanted to see the few beetles I had collected. They seemed doubtful that the mud might contain nematodes. Meanwhile the mosquitoes there in the custom house were getting their bellies full. Since getting back, I have managed to label all my samples, and enter them in a catalog so that I can take my time about examining them. You of course know that the labeling is quite as essential as the collecting."

The Los Angeles Times of October 26 certainly carried a great article about the Valero IV, the new research ship of the University of Southern California. Two photographs are at the top of the page size 10" by 7". One shows Dr. John S. Garth sorting material taken by the Valero. But the sensational article is headed in inch type " Dive of 6000 Feet Planned Off Coast". ' Benthoscope' Readied for Descent Into Sea as SC Scientific Project. " Coastal waters off Southern California will be the proving ground for projected scientific super-deep diving apparatus, it was announced yesterday by Capt. Allan Hancock, president of the Board of Trustees of the University of Southern California. Otis Barton, onetime associate of Dr. William Beebe,noted undersea scientist, plans to descend more than 6000 feet in a ' benthoscope' now being completed in Allentown, Pa. Beebe ,himself is cheduled to arrive here within a few months to undertake similar projects, according to Hancock's information.

Hancock made the announcement regarding Barton aboard the Valero IV, SC's new floating marine laboratory of which he is skipper. The elaborately equipped ship completed a trial run toward Santa Catalina Island with newsmen aboard.

The benthoscope gets its name from the root " bentho", name for the extreme depths of the ocean. It will be similar to Beebe's bathysphere and Prof. Augusto Picard's bathyscape, " submarine balloon" slated soon to dip nearly three and one half miles under the sea off the West African coast.

But the Barton vehicle, which will descend from the Valero IV, will include several radical departures, according to Hancock. Built to accomodate two men, the benthoscope will be 4½ feet in diameter, constructed of 2½ inch steel able to withstand tremendous pressure, In the air it will weigh 6800 pounds, in the water at 5000-foot depth-- 2000 pounds.Piccard's " balloon" fully equipped, weighs 40 tons in the air.

Unique with Barton's benthoscope will be a sort of heavy wooden wagon, a wheeled platform on which the vehicle glove itself will rest. The platform, like a sea prarie buckboard, will be equipped with huge wooden wheels. This, according to plan, will enable the Valero IV to tow the benthoscope along the bottom of the ocean for extensive observation of undersea life and activity.

The underportion of the diving apparatus will be made of wood asa safety precaution, so that the globe proper can be torn away from it in case of emergency.

The initial diving effort to a prospective depth of about 6000 feet will be made in the vicinity of Santa Cruz Island,Hancock said. It will be a test for more ambitious dives in the future. Hancock said Barton and Beebe plan to experiment in Southland waters to take advantage of the clarity and the relatively unobstructed bottom terrain.

Barton is the designer of the bathysphere in which he and Beebe dived 3028 feet under the surface in 1934 for a record. Recently he has been making collections for the American Museum of Natural History in New York.

Dr. John S. Garth, in charge of the floating laboratory for SC, demonstrated dredging tecnique during the short voyage. The special scoop came up with two notable exhibits.

The first, among 100 odd identifiable specimens from the channel bottom, was a growth which resembled a pinkish closed rosebud,

slightly larger than a marble. Garth scratched his head and admitted that it was a new item to him. But he hadn't had a chance to check his textbooks.

Second novelty was an ink bottle with a 3/8 of an inch neck that housed a baby octopus. While observers watched with amazement the octopus wriggled out of its unconventional home to peer back at his spectators-from a 1½ inch head. Puzzle: Which came first, the octopus or the ink bottle ?

The first submarine television apparatus (it will make it possible for the trim 110-foot vessel to televise fish at considerable depths) will be installed on the Valero IV within a few months. This was announced by Dr. Maurice Nelles who planned and installed the technical apparatus with which the benthoscope is crammed.

The SC craft, built on tuna clipper lines, can cruise for 12,000 miles without refueling. It already is equipped for receiving commercial television programs from shore. Satisfactory television reception has been obtained while the ship was cruising off Santa Cruz Island.

Captain Hancock, who is 73, personally piloted the Valero IV yesterday in and out of Los Angeles Harbor despite the presence of a fairly heavy fog."

* Note* The above Times article was written by William S. Barton

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Another marine research laboratory is now being established at the tip southern end of the Peninsula of Lower Calif.we are advised, by the School of Tropical and Preventive Medicine of Loma Linda, California.

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Dr. John Wagner, of the Hungarian National Museum died recently. In spite of his serious illness with cancer he continued to work until the end and completed his work on the Pulmonata.

****

Frederick M. Bayer, U.S. Natl. Museum, Wash.,D.C. While Ted retains his interest in conchology in which he did such splendid work his professional interests now are in the Alcyonaria.

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The Fisheries Newsletter of Australia- August,1948 contains an interesting article " Rock Cultivation and Oyster Beds"

We have several copies of some Australian magazines on our desk. Wild Life, Australian Nature Magazine is interesting with an occasional papers on mollusks and related marine life. The copy at hand Feb. 1948 has a photograph and some vomments on the brachyopod, Libgula.

Australian Geographical Magazine- Walkabout- The photographs in this periodical are really good.

****

The annual report of the Chicago Natural History Museum for 1947 is at hand also. This interesting account of the many activities of the institution is in 144 pages. The various expeditions sponsored are described. Bermuda Zoological Expedition with Dr. Fritz Haas in charge; Palau Entomological Expedition; Philippines Zoological Expedition; Mr. and Mrs. William S. Street Zoological Expd. to Alaska;Trinidad Zoological Expd.; Arkansas and New Mexico Field Trips.

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CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.
Telephone Ax. 2-7965

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The speaker of the day at the November meeting was Professor W.P. Popenoe of the University of California at Los Angeles. He is professor of Paleontology and the subject was on evolution as demonstrated by mollusks of the Cretaceous. As Professor Popenoe quoted the only difference between a Paleontologist and a Conchologist is that the specimens the one works with have been dead longer. Beautifully prepared specimens were arranged in large trays to illustrate his lecture. It is to be regretted that we do not have a cpmplete statement of the talk as given but it was largely extemporaneous and the following are notes will give no more than a few high lights, and we hope will not misquote the professor in too many details. It would be impossible here to reproduce his illustrations drawn on the board and his clear and interesting presentation.

Several groups were used among which was the Glycymeris veatchii.

The fauna of the Pleasants sandstone at the top of the Cretaceous section in the Santa Ana mountains and its correlatives in the Santa Monica Mountains and Simi Hills probably belong to the upper part of this division tho it may prove more practicable to put this fauna in the overlying division of Glycymeris veatchii major.

The fauna of the division of Glycymeris veatchii major is best developed in the various members of the " Moreno" in the Diablo Range; in the Cretaceous beds at Gabb's classic Martinez locality north of Berkeley; and in the sandstones immediately below the Tertiary contact in the region north of Mt. Diablo. There is little doubt that the fauna of the Asuncion formation described by Taliaferro likewise belongs here. The fauna is not well developed in any other localities that I am acquainted with.

Some generalization in regard to the California Upper Cretaceous faunas may be of interest. In the first place, the fauna-that is, the mega-fauna is overwhelmingly a gastropod-pelecypod assemblage. A Cretaceous paleontologist from Texas,England or France would be struck with the almost entire absence of echinoids,corals,brachiopods,and bryozoans. Evom ammonites are rare except locally. Ammonites in the usual good collection will be outnumbered by gastropods and pelecypods by perhaps one to twenty-five or fifty in number of species and one to one thousand in number of individuals.

Second, the California Upper Cretaceous fauna is essentially autochthonous; that is, it became established in the California region near the beginning of the Upper Cretaceous time, and developed in this region to the end of the Mesozoic or beyond without and very marked changes due to emigrants arriving from without.

The Glycymeris veatchii faunal assemblage is particularly uniform; the generic composition of the fauna changes but little.

It seems probable that changes in the fauna are due largely to slow evolutionary change, rather than to migrations or to exterminations of faunas and subsequent reintroductions of distinct groups from elsewhere.Many genera range through the Cretaceous represented by similar species.

For this reason, successive species belonging to the same genus appearing in a time succession are much alike and are hard to separate easily; a circumstance that has given rise to the idea- not without foundation- that Cretaceous mollusca are long-ranging in time compared to those e.g. , of the Tertiary. Similarly it has given rise to frequent misidentifications, or at least identifications in which described species are treated in a very broad sense. Many early identifications were of lineages rather than species. Correlation by comparing faunal lists is hence particularly hazardous.

Recognition of horizons based on evolutionary stages of abundantly represented lineages is practicable and with careful study to work out the lineages should be of value. Examples:

Cinulia obliqua
Trigonocallista varians
Glycymeris veatchii
Gyrodes expansa
Cymbophora ashburnerii

Others will doubtless be found with study.

Lack of critical paleontological work has added to the difficulty of identification. Lack of type and type locality designation in Gabb and other early works.

A general trend in Cretaceous molluscan lineages is toward an increase in average size of the individuals in successively younger

beds. Not always true, nor are the largest individuals of any genus always found at the topmost beds of the section. Examples: Glycymeris, Ciuulia, Trigonocallista, Turritella etc.

California Cretaceous fauna has long been considered as of the Indo-Pacific faunal province, with very little relationship to the Mediterranean-Atlantic Gulf Coast Cretaceous. Work on the Glycymeris pacificus fauna at present under way, suggests a closer relationship with the Atlantic Gulf Coast Cretaceous than has been recognized before. This may be fallaceous, however, the appearance being due to the fact that the Gulf Coast Cretaceous is much more fully described than the Indo-Pacific, and that many of the forms common to the two regions are of actually world wide occurance. The possibility of this relationship should be kept in mind, however. The early Upper Cretaceous faunas of Texas are now being monographed by Stephenson, and a comparison of his faunas with those of the Glycymeris pacificus stage will be of interest. There is a possibility of early Upper Cretaceous faunas of California being near the point of origin of both Indo-Pacific and the Gulf Coast stocks.

There is very little known of the molluscan faunas of the California Lower Cretaceous except ammonites.

There is very little similarity with the Lower Cretaceous of Queen Charlotte Islands.

A number of genera are more or less closely related in common: Glycymeris, Crassatella, Cucullaea, Parallelodon, Gyrodes, Coplocara- A fertile field for investigation.

The status of knowledge of the later Cretaceous of the Pacific Coast up to 1936 is comparable to that of the California Eocene at the turn of the century.

Many areas mapped so that areal distribution was known. Little or no information available however on Cretaceous subdivisions either stratigraphic or faunal; and little basis for correlation of one Cretaceous area with another. Example: Anderson's 1902 divisions of " Upper and Lower Chico".

Much work done since 1936, both stratigraphic and faunal. Much has been added to understanding of detailed stratigraphy of the Cretaceous; e.g. , Taliaferro in the Santa Lucia range Bennison, Payne, and others have worked in the Diablo Range, Kirby in the Sacramento Valley, west side, Goudkoff on the foram faunas all over California, the late Frank M. Anderson on Cretaceous Ammonites etc.

Difficulties of the problem: Sections with good faunas are not good stratigraphically and vice-versa. Examples: best sections- W. side Sacramento and San Joaquin valleys, but these nearly barren of fossils; best faunas found in regions where sections are not complete, e.g. Redding, Chico Creek, Penz, Santa Ana Mts. etc.

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New Publications Received

THE LAND AND FRESHWATER MOLLUSKS OF PUERTO RICO by Henry van der Schalie. Misc. Publications, Mus. of Zoology, Univ. of Mich., No. 70.

This is a remarkable work in every way- 134 pages, 16 plates, 4 figures, 64 maps. Most of our publishers should take some lessons from the one responsible for these plates. It is actually possible to identify a shell by them which is more than can be said of most I have seen in recent years.

THE COMMERCIALLY VALUABLE MUSSELS of the Grand River in Michigan by Henry van der Schalie. Mich. Dept. of Conservation, Misc. Pub. 4. 42 pages and 17 plates.

DISTRIBUTIONAL NOTES ON CANADIAN MOLLUSCA by A. La Rocque- the Canadian Field Naturalist v. 62 , No.1

JOHNSONIA- THE FAMILY TONNIDAE IN THE WESTERN ATLANTIC by Ruth D. Turner. This paper is continuing the high standard of work done in Johnsonia and will be a great addition to our knowledge of this group.

THE CHILDRENS MUSEUM OF HARTFORD- 609 Farmington Ave.,Hartford, Conn. We are in receipt of three very clever little books. The illustrations are clever and attractive. I sincerely recommend the following three little books as a very nice gift to any child you may wish to encourage , not that there is not information included that would be new to most adults. The three are:

SANDY BEACH TREASURES
ROCKY BEACH SHELLS
MORE SEA SHELLS

They sell for 25¢ each, 75¢ the set.

UTILIZATION OF MARINE LIFE BY THE WAMPANOAG INDIANS OF MASSACHUSETTS by Frank G. Speck and Ralph W. Dexter- Jr. Wash. Acad. of Sciences. An interesting paper- Ethnology.

* * *

In our last issue we quoted a newspaper clipping which mentioned a verse which formed the tailpiece of the mimeographed programs of the A.M.U. meeting in Pittsburgh. Dr. A. Myra Keen sent in a copy of it- as follows:

THE SNAIL WILL PREVAIL

For reasons easy to detail,
I like the smug,unsnappy snail,
Who to and fro is pleased to pack
His bungalow upon his back.

How fine to live without the dread
Of endless housing overhead !
How different ! How debonair
To have a home that one can wear !

To be a gastropod and dwell
Within a little shack of shell
Beyond the landlord's jurisdiction
And inconvenience of eviction-
With home-sweet-home, where'er you sit
It advantageous, isn't it ?

C. Wiles Hallock

Another amusing bit was:

Though the octopus lives in the ebbing tide,
He is usually found in formaldehyde,
Pickled and hard and preserved in glass,
For the edification of the zoology class.

J.M. Dillo

* * *

An article appeared in the Los Angeles Times of Nov. 12,1948. SEA SHELL TELLS EARTH'S TEMPERATURE AGES AGO- Thermometer 60,000,000 years old discovered in fossil called Thunderstone." A sea shell the size and shape of a cigar, known as the thunderstone, tells the temperature of the earth, 60,000,000 years ago, the Geographical

Society of America reported today.

Discovery of this method of telling how warm the earth was long ago apparently can be used to read temperatures almost back to the time when life began.

The thunderstone is the first in which the " thermometer" has been found, but the same record exists in many kinds of sea shells, and these shells in fossil form are the earliest remains of life.

An Oxygen Compound- The thermometer is an oxygen compound, which is part of the calcium carbonate that fomms all sea shells. It was discovered by Dr. Harold C. Urey and Samuel Epstein, Charles McKinney and John McCrea of the Institute for Nuclear Studies, University of Chicago.

Dr. Urey, a Nobel price winner in chemistry, found that two different weights of oxygen atoms go into making sea shells. The weights are 16 and 18. How much 18 there is depends on the temperature of the water in which the shell grows. For every change of one degree, centigrade, there is a small but measurable change in the amount of oxygen 18.

This makes shells that have fossilized a permanent thermometer for the past, unless oxygenchanges have occured over the millions of years. Dr. Urey showed that in some shells there have been no important oxygen changes.

Thunderstones are part of the skeletons of ancestors of present-day squids. They are found often on dry land, and got their name from a superstition that they showed up only during thunderstorms. They were once a magic medicine.

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Walter J. Eyerdam, 7531 19th Ave., N.E., Seattle 5, Wash. Nov.3rd. " I arrived home from Alaska on October 5th after taking 4 different airplanes. The whole trip took only about 7 hours not counting stopovers. We just missed the big storm of the year which came two days later and grounded many planes and caused many of the fishing boats to take 16 days for the home trip. This was the 16th season I spent in Alaska, mostly in the herring fishery since 31 years. Every spring the urge to go to Alaska seems to be greater. The first time I went north as cooper on a Norwegian whaler. This reminds me that I was expecting to go to the Antarctic next month on the Norwegian whale factory that is supposed to stop at San Pedro for supplies soon. The cruise lasts 9 months. I have written several times to the Norwegian consulate in San Pedro but have nothing definite yet. It is possible that because of international complications the whale factory ship will not stop in the U.S.A.

During this summer thru exchanges I managed to add several rare shells to my collection. This includes *Terebra flammea* from Florida and a specimen of *Murex argo* from Jamaica.

Now in reference to that pestiferous mollusk, *Achatina fulica* which has spread over so many islands in the Indian and S. Pacific oceans. You perhaps know that it was brought as a single pair of 1 live specimens originally in 1847 by a Bengalese coolie from Mauritius to Calcutta. These snails have spread by the millions on many islands and have done a great deal of damage. It beats me how exceedingly stupid people are in trying to combat a pest which is amplifying its reproduction by leaps and bounds and will undoubtedly eventually spread all over the S. Pacific in time if not controlled. In the first place it is supposed to be rather a delicacy, and I dare say that if those infected islands were colonized by French epicures they would soon eradicate the snails. Better

still would be to educate the natives to eat them. It is indeed strange that in some island groups nearly every kind of snail from $\frac{1}{4}$ inch size and up are eaten while they shun these large snails. In such overpopulated islands as the Marshalls and I believe some of the Carolinas where the snails are taking over the produce of several islands one would think that here would be a great boon to the islanders as an inexhaustable food sypply. I myself who have eaten several kinds of snails and found them to be a real delicacy would not disdain eating plenty of the pest. I, therefore, do not condemn *Achatina fulica* as a 100% destructive pest but as a very important source of food supply which should be made use of on a large scale. I strongly advocate that many experiments should be made to test the quality of this snail, to analyze its actual food value and if proven of distinct merit there should be started a big propaganda campaign to advertise the facts to the natives in infected islands. Perhaps a big business could be built up by shipping these snails in cold storage or canned to France, Japan, China, and many other countries. I wonder why this has not already been done. Lets hear more about it from others and especially from anyone who has eaten them.

* * *

Note on a rare book- we understand that the copy of Martyn Universal Conchologist recently appearing for sale in Carmel was purchased by Mr. J.D. Derr, Dept. of Physics, Johns Hopkins University. So far as we know this is the 7th copy in the United States. Miss Ruth Coats of Tillamook, Oregon has a copy, there is a copy in the library of the University of Southern California.

* * *

Miss Cecile Clarke of Humboldt Co., Calif. in a recent personal communication mentions snail pests in her vicinity. Of course, the usual depradations of *Helix aspersa* were mentioned but another one has me puzzled: " Another one which is a nuisance on our ranch seems to live mostly on water cress. I cannot even guess what it might be."

* * *

Fred C. Hadden, 234 Stanford St., Santa Paula, Calif. Mr. Hadden has recently returned from Samoa, Guam etc. where he spent a number of years.

David Nicol, U.S. Natl. Museum, Rm. 405, Wash. 25, D.C. " I am now an associate curator of Tertiary invertebrates at the U.S.N.M. " " I hope to continue my work on *Glycymeris* and other taxodont pelecypods."

E.J. Post, 8420 Tampa St., Tampa, Fla. It keeps us busy keeping up with our friend Post's frequent changes of address.

W.J. Bower, 340 Third St., St. Petersburg, Fla. " I wished to send you definite news about our next shell show. When I wrote you the matter had been dropped because of a new city ordinance, that seemed to be the siruation. Now the possibility of another shell show has been revived. We have agreed to postpone final decision till Nov. 28 to give the city recreation commissioner an opportunity to get councilmanic action waiving or amending the portion of the ordinance which affects our matter.

Our out of town members are drifting back and we are to have our first shell club meeting on Nov. 8th.

* * *

Dr. Joshua L. Baily Jr., San Diego, Calif. In a recent personal letter Dr. Baily wrote as follows: " ... I believe that there is definitely a need for the sort of publication you are getting out, but in printed form. I prefer printed form because that gives the writer a chance to correct the proof, and so avoid some of the errors that come when a stencil is used. If the proposition is still open, and it is not too late to vote, I would like to vote in favor of printing."

* Note* The matter of establishing a printed periodical was discussed before the club on a number of occasions, and at one time or another several members were disposed to think that in the parlance of the theatre, they had found an " angel" to finance the project. However, none appeared.

The Minutes as they are being issued now are, very frankly, making a little more than the cost of the materials, but , as editor, I have been expecting to get out an issue or two of such size and importance that they would use up any surplus we might have on hand. But the truth is simply this- these Minutes have nothing to support them other than the amounts sent in by those receiving them, and even then do well to keep even with the cost of the actual materials, paper, ink and postage.

When we were discussing the matter earlier this year I visited a number of printers. The results can perhaps be as well stated by saying that I was reminded of a trip I took a number of years ago with Slim Connelly to Mexico. We wished to do some dredging, had our line and dredges but no boat, so went out to try to charter a boat large enough to dredge from. We found a suitable boat and I asked the charge per day. When the amount was heard Slim took over saying " My friend, you misunderstood us, we didn't wish to buy your boat but just to rent it for the day." Anyway the prices I got for printing the Minutes certainly reminded me that it would be cheaper to buy out the place. Any suggestions are welcome.

****

The new book of the Long Beach Shell Club- " Shells and Shell Collecting" has been delivered. It is in 72 pages, neatly mimeographed, and bound with heavy blue paper and stripped with cloth.

The book is designed to give the amateur expert advice on how, when and where to collect as well as information on the best methods of arrangement, classifying etc.

There are articles written by the following: Mary Bormann, Adele Lewis Grant, E.P. and E.M. Chace, Mary Ann Barhett, Fred E. Barnett, Ned and Irene Baker, Mr. and Mrs. J.A. McBride, Jean Wilkins, Lillian Johnson, Mary Schollenberg, H. Arden Edwards, Howard R. Hill, Harby R. Turver, Effie M. Clark.

The book is well worth while. The cost is $1. plus 15¢ for postage. Orders should be sent to Mrs. Mary Bormann, 4331 Vermont St.,, Long Beach 14, Calif.

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Walter F. Webb's new books have just been published:

Foreign Land Shells	$5.00
United States Mollusca	5.00

They are far the best of this series. Orders for them will be promptly filled if sent to John Q. Burch, 4206 Halldale Ave., Los Angeles 37, Calif.

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Los Angeles 37, Calif.
Telephone Ax. 2-7965

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LAND AND FRESHWATER SHELLS COLLECTED IN SOUTH AMERICA IN THE YEARS 1938-39

By Walter J. Eyerdam

December 1942

In July 1938, Dr. Goodspeed, director of the botanical garden of the University of California, began sending eleven botanists to South America, to carry on the work of collecting plants, on the second University of California botanical expedition to the Andes. This was the largest plant collecting expedition ever sent to South America. The results of this ambitious enterprise has already proved to have produced a wealth of novelties, and of interesting or useful species amongst the seeds, cuttings and herbarium specimens brought back. Botanical knowledge of the southern continent has thus been much increased.

Our expedition was composed of three contingents in South America, of which one part collected plants in Peru, the second in N. Chile. Mr. Alan Beetle and I collected in Peru,Chile,Bolivia,Gran Chaco, Argentina, and Patagonia.

The major portion of the expedition was composed of six botanists, including myself, left San Francisco on July 27 on the Grace line SS Capac bound for Callao,Peru. On July 29, we stopped at San Pedro, so we went to L.A. where I spent several hours at the S.W. Museum visiting with Mr. George Willett and Dr. Hill, and

studied the California land shells and minute marine shells of the West Coast.

Dr. Goodspeed had kindly given me permission to collect such land and freshwater shells as opportunity afforded along our scheduled route. The first set of these was to be for the University of California and the second one for my collection, the third for the Museum of Comparative Zoology.

Dr. Clench has the second series, and he has agreed to publish a report on these shells in the near future, including the description of all new species. The following resumo' of our route will only briefly mention or describe such localities where land and freshwater shells were collected, in order to convey a clearer idea of the localities that will be mentioned in Dr. Clench's report.

Our trip from San Francisco to Callao, took 41 days of leisurely steaming along the coast and stopping at many ports in Central America, where we utilized every opportunity to go ashore and collect plants.

Having collected land shells in Haiti,Solomon Islands, and other tropical countries where land shells abound in profusion and diversity of varieties, it was rather dissapointing to note the paucity of the land mollusca on the west coast near the sea, and there were only a few spots where any were found at all along the entire coast. Of course, our brief shore leave in search of plants did not allow much time for search of land snails, but an experienced shell collector generally has an instinctive sense of feeling as to whether good or bad results can be expected, the moment he passes the area.

We collected plants in various parts of Mexico,Guatemala,Salvador, Honduras,Nicaragua,Costa Rica,Panama,Ecuador, and Peru. Mazatlan was our first foreign port of entry. It was during the hottest part of the day. Also the hottest part of the year, but Mr. Beetle and I, who were very anxious to become acquainted with the flora, went ashore and climbed a small mountain, while the rest of the population was taking their siesta. We came back to the ship with 46 species of plants, besides about 20 species of shells from the beaches. Several species of sponges, barnacles, and Gorgonia were collected, but no coral was found.

Mazatlan is a noted locality for collecting marine shells, but the less common or desirable species are to be found only after a heavy storm. Mazatlan is also noted for the beauty of its senoritas of various shades. This fact is quite apparent to even the most casual observer. Mazatlan has one of the finest and most delightful bathing beaches on the entire coast of America. A peculiar feature of the waves breaking on the beach, is that they curl the opposite way from the ordinary beach roller, and cause no undertow. The temperature of the water is exactly right and the bottom is firmly packed and with a gentle slope. There are no sharks or other vicious sea animals.

Some of our men had a lot of bad experiences with the little red chiggers which imbed themselves in the skin and are very irritating. One of the botanists had over 200 of them. They are generally in the cow pastures. At Mazatlan no land shells were to be found.

At Manzanillo, our next port of call, we hired a taxi, and went through this typical Mexican town, past several villages, and out into the forest beyond. We collected about 40 species of plants, some of them quite rare. Only two species of land shells were found, although intensive search was made for them in promising looking spots. Only a specimen each of Bulimulus and Oxystyla undeana were thus found aestivating on trunks of trees a few inches from the

ground.

No land or freshwater shells were found at San Jose de Guatemala, although an all day excursion into the jungle back country was made. At La Libertad, Salvador, we went ashore and rose by taxi along the fine new highway to San Salvador. Since the supression of the last revolution, about ten years ago, this little republic has become the most prosperous of the Central American countries. Coffee exports to Germany had been its chief source of income. Numerous stops were made, and a fine collection of plants, including a peculiar parasitic species of the Broomrape family, growing on the ground in the jungle in the form of an inverted cone or strobilius. No land shells were found. On August 16 at Acajutla, Salvador, Mr. Beetle and I collected 25 species of plants. In the near vicinity, I found several live specimens of the fine species of *Oxystyla undeanae* von Martens, on trees, about a hundred yards from this spot, in a saline surrounded by mangrove trees, were a species of *Corbicula* and *Tropicorbis hondurasensis* Clessin. About fifty species of marine shells were collected on the beaches. Most of these were small.

Collections of plants and marine shells were made at various ports, but the only land shells found south to Peru were a few specimens of a species of *Oxystyla*, on a small island in the Gulf of Fonseca,Honduras, and one specimen of a species of *Succinea* in a marsh, at Punta Arenas,Costa Rica.

At Guayaquil we stopped three days where two excursions into the surrounding woods and marshes were made with Mr. William Clarke MacIntyre, who came down from Banos in the Oriente of Ecuador to visit me. Not one land or freshwater shell was found.

In a small stream just north of Supe,Peru, is a demersed filiform species of *Potamogeton*, which occurs in dense grassy masses. A dip net revealed numerous shrimps, a small fish, and a species of *Physa* which occured sparingly. This was the only freshwater shell that was found along the coast of S.A. from Panama to the Strait of Magellan. A few species are known to occur within this vast stretch along the coast, but they are very sparingly distributed, and far between.

On one of the lomas or foot-hills of the Andes about 15 miles east of Trujillo amongst slide rock and debris and scant vegetation, dead shells of *Bulimulus mutabilis* Broderip, these were found in abundance. There are probably other races of this species on isolated lomas in the region. The European snail *Helix aspersa* L. was a very common pest in the botanical garden at Lima. These could easily be eliminated by a diligent use of slug bait, but the gardeners probably mever heard of this remedy. No native snails were seen in Lima. A week of energetic plant collecting around Arequipa at elevations of 8,000-10,000 feet yielded no land shells. Even the heavily vegetated sluggish streams which seemed ideal for the prolific growth of fresh-water mollusks yielded not a single specimen. A general lack of limestone and the rather recent geological origin of the west coast seem to be dominant factors in the negative occurance of terrestrial mollusks.

Lake Titicaca is about half the size of lake Ontario and lies at an elevation of 12,500 ft. above sea level on the altiplano of Peru and Bolivia.

Upon arrival at Puno on the N.W. shore, I collected several handfulls of shells from the balsa reeds, a species of *Cyperus*. Many of them were cast up on the first line mixed with *Myriophyllum*, *Elodes* and a species of *Najas* and some freshwater algae. The plants

in the shallows are harvested by the thrifty Quechua (pronounced Kooshwa). Indians who pole their balsa boats about, and rake the bottom for the weeds which are fed to their animals. Amongst these plants were found two species of *Pisidia*, two of *Planorbis* , and two or three others, as ; I. *Pisidium titicacense* Pilsbry,II *Planorbis* (*Taphius*) *andecolus* d'Orbigny, III *Littoridina andecolus* d'Orbigny and IV *Littoridina berryi* Pilsbry. Also two or three other species of shells. Although these are nearly all endemic to the lake, and there are undoubtedly a few more species in the deeper water, there seem to be no endemic genera. There is no such diversity of species and genera as exists in the large old world lakes Baikal and Tanganyika. Lake Baikal which is over 6,000 feet deep, I have visited twice, and have 30 species alone of the endemic genus *Baikalia* from as deep as 1,200 feet.

We travelled through Bolivia, and down into the Gran Chaco of N. Argentina where three months were spent in collecting plants. The large snail *Borus oblongus* was very common in some areas of the region, and seemed to have a wide distribution in South America. It is found chiefly in the forest and starts to crawl about after a heavy rain. About a dozen species of land shells were found in the provinces of Jujuy and Salta. These were mostly *Buliminus* and *Helix*.

On September 26, 1938 a species of *Planorbis* was collected in Yale Lake on Yale mountain, about 30 miles from Jujuy,at about 6,000 feet elevation. These were libing amongst Elodes and Callitriche.

Most of the rivers of northern Argentina, which are nearly dry or completely dry in the dry season, have freshwater shells. A small species of *Ampullaria* was found in abundance in a sedge swamp, about five miles wwest of the Rio Azara and another species of *Ampullaria* was found in a dry stream bed, two miles north of the Bermejo river at Embarcacion. In twelve days of travel. along the banks of the Tarija and Bermejo rivers on the Argentine Chaco and Bolivian border, no land or fresh water shells could be found.

We went through the Gran Chaco, and down the rivers Pilcomayo-Paraguay-Parana-La Plata to Buenos Aires, where we stopped three weeks before starting on an excursion to southern Patagonia. In B.A. I visited Dr. Doello- Jurada director of the national museum. He and Dr. Carcellos showed me the fine large collection of Argentina shells in the museum. Also they showed me a pile of correspondence and papers, as well as shells that I had sent in former years. The freshwater snails of the genus *Chilina*, and the land snail *Odontostoma* seem to be represented by a host of species the southern part of South America. Closely allied genera live in the southern part of South Africa, and are also numerous in varieties.

A few species of land and freshwater shells of the genera *Helix* , *Ampullaria* and *Unio* were collected from a slough of the Rio de la Plata about 20 miles from Buenos Aires. At the La Plata Museum I classified about 500 species of shells in three hours. Most of them were exotic marine shells.

An excursion after plants with a party of botanists to the mouth of the Parana river where it enters the Rio de la Plata and forms one of the largest delta systems of any river in the world, revealed not a single molluscan species. This is rather remarkable because the Parana really does have quite a number of species of Unionidaeand *Ampullaria* which probably seek the deeper holes of the river.

In Buenos Aires I found a large colony of the European snail *Helix lactea* on a street corner. Most of them had already died,

perhaps of starvation, as I presume they were lost by some Latin epicure some days previous. The Italians are rather fond of those snails for food.

On December 9th, Mr. Beetle, Sr. Eduardo Grondona and I started south from the city of La Plata in our brand new Ford truck, on a 9,000 mile excursion into Patagonia to collect plants, and especially to look for rare species of Tobacco plants.

A number of marine species of shells were collected near the mouth of the Rio de la Plata near the city of Marel Plata. At this locality right in the ocean beach bedrock at half tide mark, I found the shell of a huge giant Armadillo, a species of Glyptodont. The armour plates were about one inch in thickness. This was very near the type locality of several species of these Antediluvian living tanks. One of the largest collections in the world of Glyptodonts and other huge creatures of the remote past are on display in the great La Plata Museum which seems to specialize in fossils of large vertebrates.

No land or freshwater shells were found until we reached the Rio Quequen about 20 miles northwest of Necochea province,Buenos Aires,. At this place the river flows over a small travertine limestone falls about ten feet high and also forms a succession of pools with precipitating lime side and bottoms caused from heavy deposits of Chara. These pools and the river shallows are also overgrown with masses of Potamogeton and freshwater algae, and living Chara. This association of aquatic plants supports a large population of shells, mostly *Chilina*, two species of *Planorbis* and a tiny white elongated species cloaselu allied to *Paludestrina.* The dead shells of this tiny snail *Littoridina*, together with the lime residue of the Chara, forms subfossil beds of marl up to several feet in thickness along the banks of the river. In one of the travertine pools, there was a dense mass of mature duckweed or Lemna. In running water on one side of the river, a species of yellow Mallow was common in deep mud.

On. Dec. 31,1938, I collected five species of land shells on a rocky ridge on the hacienda Dulous in the Curumalan mountains about 15 kilometers northwest of Pigue. department of Saavedra,province Buenos Aires. There were *Bulimulus* and *Odontostomus* and were crawling around on the rocks exposed to the full glare of the sun.

On December 20,1938, a colony of *Bulinulus* was found under a prostrate species of *Opuntia* on a rocky slope in the isolated Sierra Grande mountains, a range of granodiorite. This was about 20 miles west of the Golfo San Matias in Patagonia.

The following is taken from my diary of December 21,1938.

Today I drove all around the Valdez peninsula about 200 miles. This land is connected by a narrow isthmus and separated from the Golfo San Matias and Golfo San Jorge on the coast of Patagonia. We had anticipated a good flora and especially a radically changed flora and fauna, but were quite dissapointed in the negative results. We found only a few plants that we did not already have and these were hard to find. The whole peninsula is covered with the same monotonous flora of shrubs that we have passed through in a thousand miles of latitude,but of a much more stunted habit. It is easy to see how a taxonomist would describe plants from this district as new subspecies of plants growing farther north on the mainland, but these are exactly the same that are subject to a more xerophytic existence and are for the most part more stunted. There are no cacti on the peninsula and practically all shrubs are decidedly thorny. During brief periods of rain a considerable area is covered with

grass and annual plants sufficient to sustain a large number of sheep. Much of the terrain is covered with Tertiary Ostrea beds ((large thick oyster shells). Several smaller deposits of strata have Cardium,Pecten and a few gastropods. A species of Bulimulus was found under bushes on the north coast of the peninsula. At the source spring of the Grand Saline which is a salt lake formed from the evaporation of ground waters, a species of Littoridina was found in abundance living in little pools of slime and mud amongst Rannunculus and two species of sedges. Some interesting gastropod fossils were taken from a strata in a sandy arroyo. We ate dinner at the hostel at Puerto Pyramides, a small village situated near the sea amongst sand dunes at the mouth of the dry arroyo. We were told that last year 20,000 seals had been slaughtered for their hides on the peninsula. We drove about 80 Km. over the very rough roads to try to get to the loberia or seal rookery,but haad to turn back because of the late hour. It rained lightly for about an hour. The dry season is nearly ended, and the drought had been unusually long. Thousands of sheep have been slaughtered or moved to the mainland because of the drought, so a good rain will soon be a Godsend to the sheepmen and the animals of the district. The whole peninsula, which covers nearly four million acres, is owned by a Spanish Basque who grazes many thousands of sheep.

We saw several ostriches and an armadillo, and plenty of day owls and hawks. The common jackrabbit introduced by some short sighted fool is everywhere, and that devastating pest is the scourge of Patagonia. No more can the traveller in that region see flocks of the agouti or Patagonian hare, such as Darwin saw a hundred years ago in vast numbers up to ten thousand at one time. This tall and very interesting rodent, which was really an asset to the country in which it lived is now rapidly approaching extinction largely on account of its food being destroyed by jackrabbits and over grazing sheep.

The peculiar martinet birds, which live in holes in the ground, s seem to be of a different subspecies than the birds of the mainland, being much shorter and wider. The owls hunt small rodents in the day time, and are nearly always on hand when there is a flock of sheep, ready to tear out the eyes of any sheep that falls down from exhaustion. This bird is of course an excellent scavenger, and is only really destructive to very young stray lambs. The sheepmen are not so fond of shooting all kinds of birds as some of their North American co-workers are, but the martinet birds which are generally a cock and two hens run swiftly along the road to their holes, and are really a fine game bird to hunt. Besides a shot gun, it is necessary to carry a shovel to hunt this bird successfully. This reminds me of hunting the wily and delectable geoduck on the muddy beaches of Puget Sound with a clamgun, which is merely a long handled shovel.

No other land shells were found in Patagonia although we travelled along the whole periphery of that vast bleak and barren territory of high wind and dust storms, explored much of the western and interior parts, and crossed the country five times. Freshwater shells were also conspicuous by their absence in most of the rivers and lakes where they were expected to be present. About 100 Km. north of San Julian in a dry marsh which becomes wet. Whenever it rains about a dozen species of small, but interesting and rare plants were collected. A snail related to Paludestrina, which is probably an endemic new species, was taken alive from the almost dry mud.

At San Julien we visited Herr Erwin Habicht, a Swiss, whose

father-in-law owns one of the largest estancias in Patagonia, which must be of considerable area in a country where a ranch is not considered much unless it is at least a million acres. I had a letter of introduction from his brother Paul who lives in Seattle.

Mr. Habicht took us in his car to several uninhabited places of great historical interest, but because of their remoteness from the beaten path of travel, are seldom seen, and known only to but a few people, even in Argentina. One spot that we visited, about 20 miles south of San Julian, is the site of what is said to be the first settlement ever attempted by the Spaniards in South America, which was shortly after the return of the circumnavigators of the globe. It must have been an extremely lonely place where these settlers were put ashore to found a colony on the black and forbidding shore of a vast empty and barren desert, where only the poorest crops of grain or vegetables could be raised even with much labor. A clear limpid brook runs through the site of the settlement which apparently was the only life sustaining feature the people had. Numerous broken terra cotta tiles prove that an attempt at irrigation had been made. At that time there must have been large herds of guanacos, ostriches, and agouti, so failing in supply of game animals by wandering too far back into the desert, the colony was soon doomed to perish from starvation or massacre from the roving bands of Indians, who, at that time, were said to have been cannibals, and, had not, up to that time ever seen a horse. Horses escaped from the small settlement are supposed to have been the ancestors of the wild horses of Patagonia, which the Tehuelche Indians were so adept at taming.

(To be continued in a future number of these Minutes)

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* Note* by John Q. Burch- As a shell dealer I naturally receive shipments from almost every quarter of the globe, and after reading Mr. Eyerdam's account of the scarcity of shell life in Patagonia I think that my Patagonian correspondent may well thank Eyerdam because I feel disposed to be a bit more generous with the next sizable shipment. In checking my files I find that I am receiving shells from three different persons in Patagonia and have within the current year received quite a lot of shells and quite a few species. Some of them follow with no attempt to arrange them in a proper list. These species are simply jotted down from stock boxes of Patagonian shells.

Drymaeus interpunctus (Mart); Drymaeus papyracens (d'Orb.); Bulimulus sporadicus schadei Schlesch; Topotypes-; Bulimulus sporadicus turritellatus (Beck); Planorbis tenayophylus (d'Orb.); Physa chilensis (Clessin); Eupera platensis (Doello-Jurado); Pisidium (Neopisidium) sterkianum Pilsbry; Bartlettia stefanensis (Moricand); Drymaeus formiersi (d'Orb.); Drymaeus interpunctus(Mart); Helicina densestriata (Wagner); Pila (Pila) scalaris (d'Orb.); Guppya semenplina (Morie); Entodonta discoidea (Thiele);Adelopoma paraguayana(Parod) Planorbis (Spiralina) pulchella (Phil.); Obeliscus (Opeas) gracilis v. martensi (Strob); Entodonta plenophora; Scolodonta banhOhaasi; Streptaxis apertus; Solaropsis brasiliana; Planorbis (Menetus) heloicus.... and quite a few other species.

But parts of Brasil and Peru must certainly be crawling with land and freshwater shells. I still recall the last freight shipment I received from the Amazon in Brazil. I had advised how many of this and that species I wanted- 1000 of one etc. but it hadnt occured to me that my shipper would put them all in one box large enough to hold a piano. We needed a derick to move it but it came through.

A Few New Publications Received

Revista De La Sociedad Malacologica " Carlos De La Torre" Vol.6, No.2, Nov.,1948. A number of very fine articles appear in this issue. If you are not now receiving it write Miguel L. Jaume, Calle 13 No. 351 Vedado,Habana,Cuba. As I understand the annual fee is but $2.50.

This issue contains the Index to The West Indian Marine Shells by Henry Krebs which has been being republished by W.J. Clench,C.G. Aguayo and R.D. Turner. This has been a valuable contribution of an unavailable work. Dr. Clench has a paper describing new Cerions and with C.G. Aguayo describes a new Chondropoma. C.G. Aguayo describes some very interesting fossil shells from Cuba. Mario Sanchez Roig describes and figures a number of new species and includes several new species of Liguus. Our members who are collecting this most beautiful genus will wish to add this paper to their libraries. Another paper that should be of great interest is the work of A. Ernst on land and freshwater mollusks taken from his Flora y Fauna de Venezuela.

Turtox News Sept. 1948 contains an article Part II North America's Tropical Forest by Paul Griswold Howes of the Bruce Museum in which the habits of a number of mollusks Liguus,Pila etc. are discussed and illustrated.

Catalogo Moluscos De Cuba by C.G. Aguayo and M.L. Jaume continues to be published- pages 401-450 Inc. being recently delivered. This valuable work should be added to all conchological libraries. The species are all being listed giving the original citation as well as the distribution.

This work may be purchased for $3.00 per 200 pages and the completed work is estimated to exceed 1000. Orders should be sent to Miguel L. Jaume, Calle 13, No. 351, Vedado,Habana,Cuba.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- Nov.,1948

As our November meeting date fell on a general election night president Chace was obliged to call to order a group somewhat smaller than usual since some of our members were serving on election boards. However, 28 members and visitors enjoyed a very informative talk by Dr. Willis A. Popenoe of U.C.L.A. Dr. Popenoe discussed a small section of his specialty- Some Evolutionary Series of Mollusca in the Upper Cretaceous of California.

Our usual brief business meeting preceeded Dr. Popenoe's talk. Dr. Gregg reported for the nomenclature committee that the common Succinea of Southern California should now be called Quickiella rehderi .

Mr. Kanakoff made a brief report of some new records of Pleistocene shells from the Newport Bay deposits.

President Chace appointed a committee to nominate the officers for 1949. H.A. Edwards, chairman, John Burch and Harry Turver.

Mr. John Dowdle offered to look after the making of a new supply of membership cards for the club and his offer was accepted with thanks. Following Dr. Popenoe's talk the club adjourned in the usual manner. Respectfully submitted, Elsie M. Chace, Secy.Pro.Tem.

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Miss Julia Rogers of Long Beach- author of the Shell Book and sponsor of the Long Beach Shell Club is visiting Florida having left Dec. 1st.

Mrs. A.S. Koto and daughter Adele are spending the winter at Marathon,Florida.

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Minutes of the Conchological Club of Southern California- Dec.,1948

Thirty five members and guests gathered for the December meeting of the Conchological Club. The guests were Mrs. Hans Hjorth and Mr. L.E. Berry. Greetings were received from Miss Brewster of Florida, Mrs. Effie Clark and Mrs. Rose Parks.

The nominating committee submitted the following report for consideration, for president Mr. George Kanakoff, vice-president Mr. Richard Mayhew, secretary-treasurer Mrs. Ansel Gillis. The report was accepted and the secretary having been instructed to cast a white ballot the new officers were announced elected.

Our attention was called to the dredging to be done at Cabrillo Beach and Point Mugu.

Mrs. Frances Clark, head of the laboratory of the California State Fisheries on Terminal Island haas been given a trip to New Zealand by the state. We congratulate her.

Mr. Kanakoff said that due to the exhibit of the Masterpieces of Art from Germany, our January meeting will be held in the upstairs assembly room.

The club greatly appreciated the new membership cards given by Mr. John Dowdle.

The California State Fisheries Laboratory kindly gave each member of the club a copy of their new booklet by Paul Bonnot " The Abalones of California". Mr. Turver moved that the secretary be instructed to write a note of thanks. The motion was carried.

The meeting was adjourned to listen to a most interesting and instructive paper given by Dr. Stillman S. Berry on the subject " New Light on the Taxonomy of West American Species of Crepidula". He increased out interest and respect for the humble little slipper ovate, flat or round, and all hope that we may soon hear him again.

Respectfully submitted, Henriette Gillis

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The 1949 Officers

President: George P. Kanakoff of the Los Angeles Museum
Vice-President: R.N. Mayhew, 1648 S. Genessee, Los Angeles 35
Secretary-Treasurer: Mrs.A.W. Gillis,1904 N. Madison Ave., Pasadena 6

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A FEW NEW BOOKS

The third of Webb's new books is now available and orders for any or all of the three will have prompt attention and shipment if sent to John Q. Burch, 4206 Halldale, Los Angeles 37.

Handbook for Shell Collectors- 1948 Just published- 236 pages and 97 pages of plates- The plates are clear and fine and devoted to figures of exotic foreign marine shells. $5.00

Foreign Land Shells 236 pages and 97 plates - $5.00

United States Mollusca- covers both coasts and illustrates 1400 specimens $5.00

ANIMALS WITHOUT BACKBONES by Ralph Morris Buchsbaum. This is a new edition of this standard work brought up to date with 150 new photographs,revision of the text figures and a chapter on the literature of the invertebrates. $5.00

PROCEEDURE IN TAXONOMY Revised Ed. 1948 by Schenck and McMasters Long out of print and in great demand the new edition will be enthusiastically welcomed. Almost alone in its field. $2.50

MOLLUSCA OF THE NIAGRA FRONTIER REGION by Imogene S. Robertson and Clifford L. Blakeslee 1948. This book is a definite contribution and should be added to the libraries of all interested in the land and freshwater fauna.

NEW BOOKS

John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif.

The following list of books has nothing to do with our mutual interests in natural history. However, they are all new books and are considered ' Best Sellers'. All are in the top brackets for national sales.

FICTION

THE NAKED AND THE DEAD by Norman Mailer	$4.00
TOWARD THE MORNING by Hervey Allen	$3.00
TOMORROW WILL BE BETTER by Betty Smith	$3.00
SHANNON'S WAY by A.J. Cronin	$3.00
THE HEART OF THE MATTER by Graham Greene	$3.00
THE CRUSADERS by Stefan Haym	$3.00
THE CLEFT ROCK by Alice Tisdale Hobart	$3.00
LACE CURTAIN by Ellin Berlin	$3.00
THE PLAGUE by Albert Camus	$3.00
THE SKY AND THE FOREST by C.S. Forester	$2.75
THE YOUNG LIONS by Irwin Shaw	$3.95
RESEMBLANCE ROCK by Carl Sandburg	$5.00
THE RUNNING OF THE TIDE by Esther Forbes	$4.00
CATALINA by W. Somerset Maugham	$3.00
ROANOKE HUNDRED by Inglis Fletcher	$3.50
I CAPTURE THE CASTLE by Dodie Smith	$3.00
THE BURNISHED BLADE by Lawrence Schoonover	$3.00
THE WILD COUNTRY by Louis Bromfield	$2.75
THE OLD BEAUTY by Willa Cather	$2.50
ONE CLEAR CALL by Upton Sinclair	$3.50
PILGRIM'S INN by Elizabeth Goudge	$3.00
THE GOLDEN HAWK by Frank Yerby	$3.00
RAINTREE COUNTRY by Ross Lockridge Jr.	$3.95
PARRIS MITCHELL OF KINGS ROW by Henry and Katherine Bellamann	$3.00
ASYLUM FOR THE QUEEN by Mildred Jordan	$3.50
PEONY by Pearl S. Buch	$3.00
EVERYBODY SLEPT HERE by Elliott Arnold	$3.00
FIRE by George Stewart	$3.00
CRY, THE BELOVED COUNTRY by Alan Patch	$3.00
THE IDES OF MARCH by Thornton Wilder	$2.75
THE BISHOP'S MANTLE by Agnes Sligh Turnbull	$3.00
EAGLE IN THE SKY by van Wyck Mason	$3.00
HOUSE DIVIDED by Ben Ames Williams	$5.75
BRIGHT FATHER by Robert Wilder	$3.00
THE FOOLISH GENTLEWOMAN by Margaret Sharp	$3.00
THE BIG FISHERMAN by Lloyd C. Douglas	$3.75
WOMAN WITH A SWORD by Hollister Noble	$3.00
THE FLAMES OF TIME by Baynard Kendrick	$3.00
DOCTOR FAUSTUS by Thomas Mann	$3.50
THE MOTH by James M. Cain	$3.00

The following list of books compose the top bracket for national sales in the non-fiction field.

PEACE OF MIND by Joshua L. Liebman	$2.50
THE GATHERING STORM by Winston Churchill	$6.00
HOW TO STOP WORRYING BY Dale Carnegie	$2.95
SEXUAL BEHAVIOR IN THE HUMAN MAKE by A.C. Kinsey et al	$6.50
OF LIGHT AND LIFE by Charles A. Lindburgh	$1.50
THE ROOSEVELT MYTH by John T. Flynn	$3.50
JOHN GOFFE'S MILL by George Woodbury	$3.00
WHITE HOUSE DIARY by Henrietta Nesbitt	$3.00
ROOSEVELT AND HOPKINS by Robert Sherwood	$6.00
LAUGHTER IN THE NEXT ROOM by Sir Osbert Sitwell	$4.00
THE BEAST IN ME by James Thurber	$3.00
THE PLAGUE AND I by Betty MacDonald	$2.75
CIVILIZATION ON TRIAL by Arnold J. Toynbee	$3.50
GEORGE WASHINGTON by Douglas S. Freeman	$15.00
THE MEMOIRS OF CORDELL HULL	$10.50
A GUIDE TO CONFIDENT LIVING by Norman Vincent Peale	$2.75
OUR UNKNOWN EX-PRESIDENT by Eugene Lyons	$2.95
ROAD TO SURVIVAL by William Vogt	$4.00
WINE, WOMEN AND WORDS by Billy Rose	$3.00
WESTWARD HA ! by S.J. Perelman	$2.95
A GHOST TOWN OF THE YELLOWSTONE by Elliot Paul	$3.50
GETTYSBURG Ed. by Earl Schenck Miers and Richard A. Brown	$3.50
THE GOEBBELS DIARIES Ed. by Louis P. Lochner	$4.00
PRESIDENT ROOSEVELT AND THE COMING OF THE WAR by Charles A. Beard	$5.00
INFORMATION PLEASE ALMANAC 1948 by John Kieran	$2.00
ON ACTIVE SERVICE IN PEACE AND WAR by Henry L. Stimson and McGeorge Bundy	$5.00
A STUDY OF HISTORY by Arnold J. Toynbee	$5.00
THE BABE RUTH STORY Babe Ruth and Bob Considine	$3.00
JEFFERSON THE VIRGINIAN by Dumas Malone	$6.00
MALABAR FARM by Louis Bromfield	$3.75
JIM FARLEY'S STORY by James A. Farley	$3.50
FAMILY CIRCLE by Cornelia Otis Skinner	$3.50
THE WEST AT BAY by Barbara Ward	$3.50

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Los Angeles 37, Calif.
Telephone Ax. 2-7965

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The Marine Mollusks and Brachiopods of Monterey Bay, California and Vicinity by Allyn G. Smith and Mackenzie Gordon Jr., from the Proceedings of the California Academy of Sciences Vol. XXVI, No.8, pp 147-245, pls. 3,4, 4 text figures.

This long expected publication has been delivered and will be frequently consulted and a necessity in every west coast conchological library. The price set on the work is $2.00 per copy, and may-be had from the editor, John Q. Burch.

18 new species and subspecies are described and figured . The check list and discussion make this the most valuable contribution to conchology on this coast for many years.

A complete review of this fine paper will not be attempted here nor a discussion of the new species described. A few casual observations may be of interest to some. The much discussed and debated matter of the rejection or acceptance of the Martyn names seems to find the authors in the pro-Martyn group. They use the Martyn names. The question of whether or not to separate our Californian species from the genus Murex also finds them retaining the older nomenclature and using Murex, placing them with the conservatives in this although the authors have largely accepted the divisions in

other groups.

Procedure in Taxonomy by Edward T. Schenck and John H. McMasters New Edition 1948. $2.50 Available now from John Q. Burch

The first edition of this work, designed to help students of zoology and paleontology understand the taxonomic rules and their application has long been out of print and in great demand on the out of print book market.

The new edition has been brought to date with summaries of the opinions rendered by the International Commission of Zoological Nomenclature, as well as a complete list of the International Rules.

This work should find a place on the shelves of every zoological laboratory.

Atlantic Reef Corals- by F.G. Walton Smith. A handbook of the common reef and shallow-water corals of Bermuda, Florida and the West Indies and Brazil.

This is the first complete handbook of Atlantic coast corals. Price $3.75 and may be had immediately from John Q. Burch.

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We were fortunate to have as guests Jan. 17 and 18- Lieutenant and Mrs. V.D.P. Spicer of Centralia, Washington. They were passing through on their way to Guaymas, Mexico for a collecting trip of several weeks or more. Professor J.W. Ostergard of Honolulu, Hawaii accompanied them as well as Mrs. Spicer's mother. The shell talk especially on the Cypraea ran into the early hours of the morning.

The following day we were happy to have as our guests Mr. and Mrs. A.T. Whelchel of Fresno, Calif. Mr. and Mrs. Jim Bailey and Pat Patton came over for the evening and another pleasant shell evening passed.

Mr. A. Sorensen of Pacific Grove and Mr. and Mrs. John Strohbeen are also on their way to Guaymas for a month or more to collect. It looks as if Guaymas is going to have its usual quota of shell enthusiasts this winter with quite a delegation already on hand.

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Henry Dodge, 6 Rochambeau Road, Scarsdale, N.Y. We regreted very much not being able to see Mr. Dodge and party as they passed through Los Angeles en route to Honolulu, but we talked on the phone and have been promised a visit on their return which may be even better since they will then be full of shell news from Hawaii.

Howard Gilmore, 97 Holland Road, Brookline 46, Mass. We have a letter from Mr. Gilmore that he and his family are passing through en route to Honolulu and will be in southern California for a brief visit. We hope to see them.

Dr. Asela B. Franco, Cebu City, Cebu, Philippines. We have a letter from Dr. Franco that we may expect her as a guest in our city soon and a suggestion that we advise here that this will necessarily suspend any of her exchanges until her return.

Miss Ruth E. Coats and mother of Tillamook, Oregon are expected as guests within the week. They are stopping over in San Francisco where they will visit Dr. Hertlein of the California Academy. The plan is to stop over along their way to Florida for a visit.

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Dr. C. Montague Cooke Jr. of the Bernice P. Bishop Museum in Honolulu, Hawaii recently died. He has long been acknowledged as the authority for the land shells of the Central Pacific islands and his death will be a genuine loss to science. No doubt suitable biographical sketches will be published.

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Turtox News for December, 1948 carried a very interesting paper by Dr. G.E. MacGinitie " Dredges for Use at Marine Laboratories". Five different types of dredges are figured and discussed. The article is good and agrees largely with our personal experiences. The first line is very true indeed " No one dredge can serve all purposes". The rocky bottom dredge he figures is almost an exact figure of the type we found most useful on the shale at Monterey and the gravel off Redondo etc.

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The Washington Post of Dec. 26,1948 carried quite an article on the work of Dr. Elmer G. Berry " Native Snail Found Host to Tropic Fluke". Public Health Service scientists have found that a common amphibious snail here can transmit the organism of schistosomiasis parasitic menace of the tropics. They emphasized, however, that the snails have never been found naturally infected, and have only demonstrated their ill capacity in laboratory tests at Bethesda,Md.

The potential missing link in the strange life cycle of Asiatic " blood flukes" was identified by the scientists as a rice-sized snail they hand -picked from the river marshes near Rosslyn, Va.

The snails abound, moreover, in many fresh water areas of the United States from the Atlantic to the Mississippi and from Louisiana to Canada, according to Dr. Elmer G. Berry, malacologist, of the Laboratory of Tropical Diseases, National Institute of Health, Bethesda.

1600 Troops Affected

Importance of the laboratory discovery, said Dr. Berry, is that schistosomiasis did affect some 1600 American troops in the past war, and that fear has often been expressed the returned soldiers might unwittingly introduce the disease to their homeland.

Fortunately, no endemic (naturally occurring) cases have been reported in this country since return of the veterans.

The mature parasites live in the abdominal veins of humans, and lay their eggs in the small venules of the intestines and liver. It is necessary, however, that the early larval stages develop in the digestive glands of certain species of snails, it was explained.

Until the recent findings of Dr. Berry and his coworker, Miss Ruth Rue, parasitologist, it was not known whether snails native to the United States could serve as intermediate hosts to the body-destructive organism.

The two Public Health Service scientists found the culprit after nearly three years of exhaustive testings with thousands of snails of some 15 species collected throughout the Unites States.

Related to Asiatic Hosts

The local snail, a member of the family *Pomatiopsidae,* inhabits vegetation alogg the river banks and sewage areas. It was studied as a likely suspect because of its close relationship to one of the three main Asiatic snail hosts, Dr. Berry said.

It can serve, he said, much as did its Asiatic cousins, which were a particular menace to American troops in bridge building duties on Leyte,Philippine Islands scourge spot.

The larval form of this parasite, known as miracidium, hatches hatches from eggs that have been excreted from the human body. It is a free swimming organism, and will attach and penetrate the tissues of certain snails. Within the snails, the miracidium develops into sporocysts. And from these sporocysts there later emerge cercariae, the fork-tailed larval " blood flukes". The cercariae in turn, can penetrate into the blood stream of humans, where they

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develop into mature worms, mate and lay eggs, and complete the life-debilitating and often death-dealing cycle.

Danger in Repeated Exposure

Since the parasites seldom penetrate man in sufficient numbers in one exposure to cause fatal consequences, the greatest danger is in repeated exposures, Dr. Berry said. So far, he explained, this danger has been confined to tropical and subtropical areas, where the usual snail hosts are present.

The latest finding of a likely snail host in the United States leaves open the question of whether the parasite disease might some day spread here, Dr. Berry said.

In the meantime, however, other scientists at N.I.H. are busy trying to find molluscacides that will kill off the snails if the need is ever shown, he said. DDT and other insecticides don't seem to affect most snails he added.

The parasite invaders can live as long as 12 years in the human body, explained Dr. Berry. Moreover, even without human cooperation their life cycle can be carried on within rats, dogs and other warm-blooded animals- and the snails, he said.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- Jan. 1949

The first club meeting of the new year was called to order by our new president, Mr. George P. Kanakoff in new surroundings and many new faces among the thirty-three members and guests present. We hope the guests will return and become members and we were glad to welcome Miss Eleanor Caruthers, Mrs. Priscilla Linkogel, and Dr. Irene McCulloch who are seldom able to meet with us.

The Minutes of the December meeting were read and approved. The treasurers annual report was accepted. The president thanked the outgoing officers for their good work of the last year and the club responded with a hearty hand clapping.

The following committees were appointed:-

Program- Mr. Grau,Chairman- to name assistants
Hospitality- Mr. Mayhew- "
Field- Mrs. John Q. Burch- "
Editorial- Mr. Burch, Mr. Chace
Nomenclature- Mrs. Chace, Mr. Burch, Dr. Gregg
Educational- Mr. Turver,Mrs. Chace, Dr. Gregg

The president, in appointing an educational committee, said that it was to provide the technological information and literature to those who desire such help in their effort to become real conchologists. There has always been a helpful spirit on the part of the members to assist, but it was felt that such a committee would relieve the seeker from any possible ambarassment. The club by vote endorsed the new committee. It was moved and carried that the names of the members of the Educational Committee present and their specialties be announced at each meeting.

There were communications from the Hamburg Museum. thanking those who sent shells (about 300 sets have been sent) and also telling the need for books. The books Shells and Shell Collecting by the Long Beach Club was announced. It has received favorable comment by Dr. Harald Rehder,Dr. Pilsbry, Dr. Joshua Baily, Dr. Leo G. Hertlein and Dr. Myra Keen.

The business being completed the meeting was turned over to our speakers- Mr. H.H. Patton and Mr. Jim Bailey, who showed very beautiful slides of their trip to Guaymas,Mexico and shells gathered there. It was a feast of desert and shell beauty and every moment was enjoyed.

After the pictures we had the annual Grab Bag which was quite glorified by the artistic work of Mr. Leonard Bo osom Jr. There had evidently been more than one Santa on this post Christmas job.

The Conchological Club of Southern California certainly started out the new year most auspiciously.

Respectfully Submitted- Harriette W. Gillis

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Long Beach Shell Club

The annual Christmas party was held in the home of Mr. and Mrs. Fred Barnett. The new officers elected for 1949 are: H, Arden Edwards, President; E.P. Baker, Vice President; and Ralph Bormann, Secretary and Treasurer.

The new book " Shells and Shell Collecting" is having a very fine acceptance according to all reports , and it is almost sold out of print.

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Walter J. Eyerdam, Seattle, Wash. " I was a little too hasty in diagnosing the shell from Jamaica as Murex argo as with more critical examination by experts it proves after all to be only a variety of Murex brevifrons, which is closely related to M. argo. Please rectify the error for me.

I note in the Minutes of last August that Dr. Van Hyning has a very large pair of 500 pound 4 foot long Tridacna gigas . Ho if you or anyone else knows of a larger one. This is, of course, a mature sized shell and there are very few of such proportion. The bext known specimen, which has practically the same dimensions and weight is the one which contained holy water in the church of St. Sulpice,Paris. It was originally presented to king Francis I by the city of Venice. When I visited professor Tom Iredale at the Australian National Museum in Sydney he showed me the 4½ foot long Tridacna which he claimed was the largest in the world. It is obvious that one of this size would be much heavier than one six inches shorter. My guess is that the largest specimens are still in the ocean at a depth of around 100 ft. While I was travelling on the steamer from Sydney to Papua in 1929 the chief aviator of the New Guinea Gold Fields told us about an exceedingly large Tridacna that he and about a dozen native divers tried to dislodge from the coral at about 20 feet depth. After working on it for days they gave it up as a bad job. I cannot recall the dimensions of which he told us in all sincerity, but it was considerably larger than any known specimen. Naturally most of the easilt pried u up Tridacna within many miles of human habitations are eagerly sought for food. One of the most remarkable features of the giant clam is that it raises it's own food which constantly grows like yeast on its mantle in the form of a special microscopic algae. "

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* Note*- It must be difficult for one who has not handled these large shells- Tridacna- to appreciate their weight. I have one just outside my door which arrived in a freight shipment today and it must be a mere baby by comparison with the giants mentioned above. This one only measures around 30 inches in length- BUT it came packed in a large metal oil barrell and would just barely fit. In fact, we had quite a time getting it out. It was a good way to ship it though because every inch of it is perfect. But we needed a special skid to get the thing off the truck and the shell itself weighs approximately 130 pounds. Larger ones can be obtained but freight and handling such a thing would make it an expensive shell if it came to you gratis at the other end.

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Willard Mohorter, Cincinnati, Ohio " ...We are just back from 3 months spent mostly in south Mexico. Worked Gulf of Tehuantepec and beached in Puerto Angel area. Because of transportation difficulties we lacked shelling equipment or even means of bringing out more than a few gallon shells. Shells were numerous but we found only the commoner Panamic species. One the way home we gathered some Olivas and Cassis from the strong colonies we found south of Vera Cruz and also in the Tuxpan area (Gulf Coast)."

W.J. Bower,St. Petersburg, Fla. " The final word on the proposed shell show of the St. Petersburg Shell Club is that it has been postponed to 1950. At our last meeting we had the pleasure of having with us as guest of honor, Miss Julia Ellen Rogers, well known author of The Shell Book".

Walter J. Eyerdam,Seattle, Wash. " Received the Minutes and the separates on my Patagonian article. Many thanks for the same. While reading it over I noticed one grievous discrepancy which might 1 look like a bit of nature faking to an ornithologist in case one with a critical mind reads it. The girl that rotyped wrote it inadvertantly missing half a dozen lines (#86 p 6- December,1948). I have had the paragraph rotyped, so please do me a favor and add the enclosed part to your next installment of my article about collecting land and freshwater shells in South America. The way it reads before, the poor day owls are falsely accused of gouging eyes out of sheep instead of attending strictly to their private business of catching rodents.

Another item that I wish you would print at the request of our mutual friend Frank Lyman is his enclosed letter. If you recall Frank's last paper in which he panned certain conchologists that clutter up the mails with mimeographed sheets, I had the impression that he probably meant you because you had in the past been criticised by certain envious parties. I jumped to the hasty conclusion and wrote to him that if he referred to you I will proceed to explain why he couldnt use better paper and to have them printed. Anyway, Frank didn't have you in mind, but I am afraid that some other people may have had the same opinion I did, so now if you will print his letter it will put us all straight"

" Dear Walter: I hasten to straighten you out on my views: John Q. Burch, his great work in Conchology etc. My note re: mimeographed sheets had no reference to my good friend John Q. I shall try and remember and publish a brief to that effect in the next issue. It is unscrupulous dealers of a stripe never worn by the likes of John Q. that I am scalping. I am surprised you misunderstood, but as you did, many others might have been. Please send this to John and tell him he may publish it. It'll be three months before mine comes out again and meanwhile much harm may be done by unthinking readers who jump to a conclusion." Frank.

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Many thanks- Frank. Frank Lyman's Shell Notes are a genuine contribution to conchology and I have on many occasions so stated and always marvel at the excellence of his little booklets, However, I will take issue to this extent. I think Frank's Shell Notes are fine for what is in them, not because of the quality of the paper or ink, Some of the greatest pieces of conchological nonsense I have on my shelves is printed on expensive paper and bound in fancy bindings, and some of my most valued reference files are long hand scribblings on scratch paper but made by a scholar who knew what he was writing. I am afraid that mere paper and ink will hardly take the place of brains. By the way we have been thinking of using " offset" but that is no better than mimeo other than the fact that you can reproduce the figures from photographs.

LAND AND FRESHWATER SHELLS COLLECTED IN SOUTH AMERICA IN THE YEARS 1938 and 1939 by Walter J. Eyerdam.

The following is a correction from Minutes 86 p 6,Dec. ,1948
" The peculiar martinet birds which live in holes in the ground seem to be of a different subspecies than the birds of the mainland, being much shorter and wider. The owls hunt small rodents in the day time and are generally to be found in threes and fives, sitting on fences, or standing in the middle of the road. The evil looking carancha birds which are a sort of eagle vulture, seem to hold their own everywhere that sheep and cattle are raised in Argentina, and some of them are nearly always at hand where there is a flock of sheep, ready to tear out the eyes of any sheep that falls down from exhaustion. This bird is, of course, an excellent scavenger and is only really destructive to very young stray lambs. The sheep men are not so fond of shooting all kinds of birds as some of their North American co-workers are, but the martinet birds which are generally a cock and two hens run swiftly along the road to their holes and are really a fine game bird to hunt. Besides a shot gun, it is necessary to carry a shovel to hunt this bird successfully. This reminds me of hunting the wiley and delectable geoduck on the muddy beaches of Puget Sound with a clamgun,which is merely a long handled shovel."

The following is a continuation of Mr. Eyerdam's article from Page 7, Minutes 86,Dec. 1948
Two other historic spots of great interest, but not known to many people can be seen in the Bay of San Julien. The most valuable historic records are of the petrified keel of Mendosa's ship that mutinied against Magellan because the disheartened crew feared to follow the cold stormy coast ever farther south into colder, and more inhospitable seas, from which there was but little hope of ever returning to Europe. There seem to be no shipworms or Teredos along this coast, and I could find no piece of driftwood boring mollusk. The ship of Mendosa was sunk by a broadside from Magellan's ship early in the morning just as it was about to slip the anchor and steal away in the fog. Several of the ringleaders of the mutineers were hanged on a nearby hill, and Mendoza was put in irons. As a very remarkable coincidence practically the same thing happened at the same place and apparently for the same r ason during the second circumnavigation of the globe under Drake's flag. As near as can be conjured, Drake's mutineers were hanged on the same hill as were those in the fleet of Ferdinand Magellan. The traitors were all hanged on hangman's hill.

A large collection of plants was made along the whole route of our travel, and but few species in flower were missed. In a small lake about 30 miles north of the strait of Magellan on the Rio Gallego Punta Arenas road, was found in abundance, *Lymnaea diaphana* King, but no other species were found. Punta Arenas or Magellanes on the strait, is a city of about forty thousand people. Besides being the crossroads of south Atlantic and Pacific shipping, it is the most important outlet for the Patagonia and Tierra del Fuego wool and the center of an important gold mining district, and of s several other industried. Most of the surrounding country has been logged off of its small forests of Antarctic beech, and is covered with grass and hardy weeds which furbish good fodder for the sheep. The island of Tierra del Fuego, which is about the size of the state of Ohio, and is owned by both Chile and Argentina, is a land of mountains and glaciers, and abundant precipitation which sustains

pasturage for some of the largest herds of sheep in the world. Most of the Indians, up to recent times, were mercilessly hunted down by professional white hunters, who received one British pound for every Indian nose from the big sheep ranch owners to rid the stolen lands of their rightful owndss. This practicew went on until two tribes were completely wiped out of existence, and the remnants of the remaining Indians were rescued by Catholic missionaries.

About 50 Km. S. E. of Puerto Natales,Chile, along the bank of the Rio Ruben, a species of Lymnaea was taken from the deep oozy mud amongst Batrachium and Callitriche. Not far from this site, on the road to Punta Arenasm is a peculiar Sphagnum bog where the moss grows into mounds like haycocks or beaver huts all over the bog. They are about one to one and one half meters high. The inside core is of gumbo mud, and it is possible that these mounds have persisted for hundreds of years, and have increased instead of deteriorated in size. Near Tenino,Thurston County,Washington, are thousands of mounds of similar shape as these near the Ruben that have persisted since the ice period,and this region marked the southern limit for the ice cap in the state of Washington. Many kinds of theories have been advanced by geologists and students, some of them seem rather fantastic. I have passed these mounds many times, and could never understand how they could have been caused until viewing these peculiar mounds in Patagonia, which are still in the process of building. I believe that the Tenino mounds we re formed in a similar manner.

All of the large lakes of Patagonia were visited, and their shores explored for plants and shells. These include the lagos Argentina, Viedma,San Martin,Tar, Musters,Cohuel Huapi,Buenos Aires and Lago Manuel Huapi. Lago Argentina, which is about 100 miles long and which lies in south western Patagonia is one of the largest lakes visited, On its western end lies the region of the glaciers of the Chilean inesplorado. It was the only lake that yielded shells. In the national museum at Buenos Aires I saw Lymnaea and P Planorbis from lago Nahuel Huapi, but I found none on the north shore which is mostly heavy glacial gravel from the glacier on the western end of the lake. In a lagoon on the north shore of this 75 mile long lake grew dense masses of a species of Myriophyllum which attains a length of over three meters. Windrows of this plant lined the shore to a depth of a foot. Careful examination of this promising looking material yielded no shells. The lagos of SW Patagonia including Argentina,Viedma,San Martin, and Buenos Aires,all have glaciers on their western ends which lie within Chilean territory. The lago Tar seems to be a lifeless body of water in a barren volcanic desert in the region between lagos Viedma and San Martin. The lagos Musters and Cohuel Huapi are of considerable extent, and lie closse together in the north central portion of Patagonia. They are shallow bodies of water subject to much variation of shoreline throughout the year. Neither of these lakes are inhabited by mollusks. Nahuel Huapi is a fine large lake in NW Patagonia which extends into Argentina proper, and into the Chilean Switzerland. Its general shape, with its deep fjords winding amongst high mountain valleys, is like a great octopus. It is the favorite r sort of well-to-do tourists or vacationists of the Argentine.

The region around Califate, near the south shore of lago Argentina is not especially rich in plants, but the scenery is fine. Back of the village of Callifate are big stratified metamorphic cliffs, and across the lake are wild snow covered mountains, most of which are still unexplored. The plateau is only about 300 meters

in elevation, but it gets very cold in the winter, and the icy winds blow almost constantly. About 20 years ago Lago Argentina attained a considerable amount of notoriety in some of our nature faking newspapers in an account of a British expedition, which was said to have outfitted at great expense to try to catch live pre-historic animals, including the Plesiossaurus and other fantastic monsters of remote geological ages, which were said to be still living in this lake. It is very doubtful whether any member of this expedition had any thought of the existence of such animals. The fact is, however, that a great many species of fossil animals have been found in Patagonia, and it is certainly a productive field for the well equipped paleontologist.

Three species of *Chilina*, a *Lymnaea*, *C. Oldroydae* Marshall, *C. smithi* Pilsbry, *C. fulgurata* Pilsbry and a *Musculium patagonium*, and a *Pisidium magelanicum* Dall were found in abundance cast up on the sand shore of lake Argentina in windrows mixed with Myriophyllum and Anacharis, on the south shore of the lake. Large flocks of Patagonian kelp geese were always at hand on the muddy flats of the back beach area of this part of the lake shore. Farther down the coast toward the east, where the shore was strown with boulders, only a few specimens of depauperate *Chilina* and *Lymnaea* were found. About ten mihes east of Califate, near the lake are cliffs of andesite and conglomerate. Some of the best examples of wind erosion that I have ever seen occur on these cliffs, and in a cave we saw a few Tehuelche Indian inscriptions. My colleague, Mr. Beetle took some photos of these picture writings, and of the wind erosion formations.

On January 19,1939, we drove all day long until evening over rough and very bad roads through uninhabited country, and arrived at Caracoles, which consists of a small hostel, and a general store. The whole land between lago Viedma and this place is the same monotonous waste of arid region which characterizes typical Patagonia In two stagnant pools of the Deseado river about 12 Km. NW of Caracoles, I found a few specimens of *Musculium patagonicum* and a large species of Chilina. These slimy pools were 3 yards to 5 yards across, and full of vile smelling Chara of two species, and with a stand of bullrushes in the larger pool. In the small trickle that was still left of the Deseado river at this season were Potamogeton, Carex, Rannunculus, and Myriophyllum.

Friday, Jan. 20, 1939, town of Buenoa Aires. Today we saw a flock of 60 guanacoz. We collected nicotiana corymbosa. We have now found a weed in sandy spots near villages or estancias. We have not found it elsewhere. Very bad roads were travelled for hundreds of miles as usual, and through stretches of gumbo clay deserts where there was no sign of plant life. Small ranges of hard barren clay of many colors, some were hues of yellow ochre and sienna, of kinds suitable to the manufacture of cheap paints. Some of the hills were of bright red ochre, some of burnt umber, and of many colors. Stretches of new road are under construction in many remote and hitherto untravelled areas of Patagonia, and it is expected that within the next twn years practically the whole territory will be accessible to auto traffic. At the rate that our South American neighbors are making new roads it is expected that within the next ten years it will be possible to travel by auro from the Arctoic Ocean to the south end of Tierra del Fuego or for that matter from Tierra del Fuego to Paris or any other part of Europe via the Bering Strait.

Although dilligent search was made at every pond or small lake for shells, only a single specimen each of a *Planorbis* and an *Ancylus*

were found in a pond near the town of Lago Buenos Aires.

Many days were spent in collecting plants along a thousand miles of the shore of the Rio Chubut, which is mostly in uninhabited region. Only at one spot called Paso de Martires, on the Chubut, did I find any shells. These were a *Planorbis* and a *Chilina fluctuosa ovalis* Sowerby.

The object of the excursion into Patagonia, in which we traveled about 8,000 miles, was the quest of three rare species of tobacco (Nicotiana). The rarest and most desirable species was a tiny plant about one inch high, which was known only from a single sheet which was collected in 1898 by Spegazzini, who described it as Nicotiana scaulis. It was found at that time in the district of Monte Leon in SE Patagonia. We could not find it down there, but finally we found a small patch of it growing with very long roots on a few gumbo domes in a river wash. The locality was nearly two thousand miles NW of the only other spot that it had ever been reported from.

At Bariloche on the shore of lago Nahuel Huapi I sold our Ford truck. Our Argentine companion botanist Eduardo Grondona went back to Buenos Aires while my other companion Mr. Beetle, and I travelled through the Chilean Switzerland, and on to Valparaiso. After a couple of weeks in Valparaiso, Mr. Beetle returned to California, while I went up the coast and over into Bolivia again, where I collected plants in the districts of Cochabamba, and the Yungas for about three months. Land and freshwater shells were surprisingly scarce, even in the most likely looking places. Several species of *Bulimulus* and one giant snail, which is found more or less sparingly along the eastern slopes of the Andes in the tropical forests. It is *Berus popelareanus.* While traveling through the Chilean Switzerland and walking along the pumice pebble shore of Lago Llanqueque, I found over 100 dead specimens of *Chilina ihringi* Marshall and one valve of a *Unio.* In the desert back of Mollendo,Peru a species of Bulimulus was not uncommon. On the 3rd of May,1939, while on the return voyage, on the Condor, I visited Dr. Don Frizzell and his wife Harriett, whom I knew when they were students in the University of Washington in Seattle. Later in the year they were both back in Seattle and paid me a visit. Dr. Frizzell is a paleontologist for the Standard Oil Co, at Negritos,Peru, and has quite a large collection of shells and fossils at that place in his laboratory. When we were stopping here 8 months before, the entire region was a barren desert of shifting sands and sandy aroyos where it seemed that nothing except a few very zerophytic plants could hope to survive, but on our return trip the region had been visited by a deluge of rain, the first in twenty five years, and now the grass was deep over the entire landscape.

In conclusion I must say that western and southern South America is poorly represented by land and freshwater shells.

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NOTICE

A field trip will be held on Sunday afternoon,Feb. 13. The chairman is Mrs. John Q. Burch, 4206 Halldale, Los Angeles 37 and those wishing to go will advise her.

The exact place has not been decided but the date is set and the tide is a minus 1 foot 5. Good weather permitting it should be a great collecting day.

This is a part of a new program of the Conchological Club. We expect to hold numerous outings, luncheons, and collecting excursions this year.

THE AMERICAN MALACOLOGICAL UNION, WESTERN BRANCH, will hold the annual meeting in Long Beach, Calif. June 10,11 and 12. The details will be announced in our next issue.

Miss Ruth Coats of Tillamook,Oregon and her mother have been visiting in Los Angeles on their way to Florida and the date and place of the above meeting was decided on her trip. Miss Coats is president of the organization. They stopped on the way down in San Francisco and visited with Dr. Leo G. Hertlein of the California Academy of Sciences, and Allyn G. Smith, also of the Academy. Dr. A. Myra Keen came in from Stanford University also.

This postscript has been added to the minutes so that all interested may make their plans in accordance with the dates set in June.

MINUTES 88
FEB 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at the Los Angeles Museum, Exposition Park at 7:30 P.M. All interested persons are cordially invited.

Please send all news items to your editor,

John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Phone Ax 3-5710

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We have the following interesting note from Professor Trevor Kincaid.

" During the first week in May,1948, I examined several boxes of seed oysters which had been shipped from Kumamoto in Southern Japan to be planted in Willapa Bay,Washington. On opening up the cases they were found to be swarming with living molluscs,including 10 different species. A set of these was sent recently to Miss Myra Keen for identification and she reports the list as follows:

Barbata obtusoides (Nyst)- one specimen
Volsella senhausi (Benson)- one specimen
Littorina scabra intermedia Philippi- numerous specimens
Littorina brevicula Philippi- 5 specimens
Thais bronni (Dunker)- 12 specimens
Mitrella pardalina tylerae Griffith & Pidgeon- 6 specimens
Nerita japonica Dunker- abundant
Cerithidea cingulata Gmelin- 1 specimen
Batillaria multiformis (Lischke)- abundant, many of the specimens with small oysters attached.
Acmaea heroldi signata Pilsbry- 12 specimens

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We are pleased to have a letter from our member , Professor Herman W. Miller of San Jose, Costa,Rica. He reports that his health is improved and he is planning collecting trips again.

MARINE MOLLUSKS OF SONORA,MEXICO

By Andrew Sorensen

Miramar Beach near Guaymas in the state of Sonora,Mexico is the Mecca for conchologists who want to study the molluscan fauna of the west coast of Mexico, for here, within a radiur of twenty five miles north and south, can be found specimens of nearly all the species that inhabit the Gulf of California.

This is largely due to its location, nearly halfway between the mouth of the Colorado River at the apex of the Gulf and Mazatlan at the south end.

In addition to its favorable location Miramar also furnishes all the diversified conditions required for the successful propagation of many contrasting forms.

Miramar Beach itself is sandy and here live four species of beautiful gastropods of the Olividae family namely *Oliva angulata*, *Oliva venulata*, *Olivella dama* and *Agaronia testacea.*

There are also two species of Conidae sometimes in great numbers, namely *Conus mahogani* and *Conus comptus.*

After a severe wind you may find *Strombus gracilior* washed up on the sand. They live in fairly shallow water but below the tide level. They are very similar to *Strombus pugilis* of the Florida coast both in size and shape but of a different coloration inside. Of other gastropods found on this beach may be named *Archetectonica granulata* called sundial by the ladies; for short, and the peculiar tusk shells of Dentalidae. They are peculiar little shells, a couple of inches long, nearly straight, without whorls, and pointed at one end.

Of bivalves this beach has but few, while the nearby lagoon is teeming with them. On both sides of Miramar Beach are rocky shores and highlands where the rock-dwelling mollusks abound. The largest of these is the *Strombus galeatus* found in greatest numbers at Punta Colorado and also on the other rocky beaches. Its shell, when mature, is very thick and this alone may weigh many pounds.

The meat of the animal is eaten to some extent and is of good flavor,but it is not used nearly as much as that of its cousin in the Bahamas and Florida the *Strombus gigas.* In the Bahamas the meat is dried in quantities and as chowder is served in the best restaur--ants in Miami and Key West.

The much smaller *Strombus granulatus* lives in deeper water and its shells are washed up on outlying islands. It is a beautiful shell.

Another large rock-dwelling gastropod is *Fasciolaria princeps* which may reach ten or eleven inches in length. It is noted for the beautiful purple and lavender color of the animal when alive. Resem--bling this but with a comparatively slimmer shell, is *Fusinus dupetithouarsi* some five or six inches long. *Vasum caestus* with its heavy three to four inch shell is the only species of Xancidae found, or at least recorded in the Gulf.

Of the Thaisidae the more common forms abound such as *Thais biserialis*, *Thais triserialis*, *Thais kiosquiformis*,*Thais rugosum*, *Thais patula*,*Acanthina muricata* and *Acanthina tuberculata.*

On the inside rocks are the popular green *Acmaea mesoleuca* and on more exposed outside rocks the larger *Acmaea discors*, as well as two species of *Fissurellas*. Among the rocks we take *Modiolus guaymensis*, *Glans affinis*, *Anomia peruviana*, *Anomia adamus*,*Pedalion chemnitzianum*,*Margaritiphora mazatlanica* (the five to seven inch

Gulf pearl oyster)

The large Chama mexicana is found everywhere attached to rocks, but the six to eight inch Spondylus limbatus is found on flat island ledges where one must use a large chisel to remove them, and occasionally on loose rocks.

The Pinna maura lives in sand and among the rocks. Its large adductor muscle or scallop, is esteemed for food.

The small Conus nux lives in crevices in the rocks and the larger Conus princeps, Conus purpurascens, Conus brunnea, Conus virgatus, Conus regularis, Conus gladiator, and others are quite numerous.

Also among the rocks are found Turbo fluctuosus,Cypraea annettae Cypraea robertsi, Cypraea albuginosa,Cypraea arabicula, and Trivia solandri.

In deeper water live Cassis coarctatus,Cassis tenuis and Harpa crenata, and from still deeper water the shrimp fishermen bring in the large Malea ringens.

It would be an almost endless task to mention all of the different species that can be found on the rocky beaches of Fusinidae, Mitridae,Buccinidae,Nassidae,Pyrenidae, and other families.

The bivalves are fully represented in the local lagoon, the " Esteró del Soldado", a few miles distant, and in Bahia San Carlos some eight miles northwest by boat or twice that distance by automobile. Clams taken for chowder by the bucketfull are mostly Chione succincta, while Chione fluctifraga,Chione undatella, and Chione gnidia are found in smaller numbers.

Many small bivalves such as Anamalocardia subrugosa, Cardiums, Semeles,Telinas, and Donax are here in countless numbers, while the large Dosinias,Macrocalistas, and Codakias are also present.

The great number of clams in the lagoons furnish a dependable food supply for the many Murex bicolor and Murex nigritus that live on them.

The Murex travels deep in the sand till it finds a clam, a Turritella or a small Strombus, then brings it to the surface and eats it. The Murex is also a scavenger as proved on February ninth this year when Mr. and Mrs. Spicer and the writer counted fifty one (51) large Murex bicolor feeding on and completely covering a large dead fish at San Carlos Bay.

On the long sandy beach south of Empalme one of the rarest and most peculiar clams is found. It is Pitar lupinaria.

It is a two to three inch clam beautifully colored with lavender on shiny white ground and each valve is ornamented with a row of one half inch to one inch long spines. It is said to live only in a few places in North America.

As previously indicated a few specimens may be found here of species whose type locality is Panama or La Paz or some Central American State.

On " Isla Blanca" we have taken Conus dalli and Conus ferguseni and Oliva porphyria; on Punta Colorado, Cypraea cervinetta and Phylonotus brassica, besides the only Voluta one the entire coast, Enaeta cumingii and others.

An energetic and observant collector may find about three hundred valid species of mollusks in this neighborhood, but he should not expect to locate them all in one season for his find will vary with the time of the year and his enthusiasm will vary with the quality of his find.

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Mr. Sorensen has just returned from a visit to Miramar Beach where he was accompanied by Mr. and Mrs. John Strohbeen, Mr. and Mrs. Phil Spicer and others.

Some New Publications

" West American Mollusks of the Genus Conus" by G.D. Hanna and A.M. Strong- Proceedings of the California Academy of Sciences, Fourth Series, Vol. XXVI, No.9, pp 247-322, pls. 5-10, 4 text figures-Jan. 28,1949.

This is the work for which we have long been waiting. The plates are excellent , the text pertaining to all species is very complete, and the elaborate key to species will be invaluable to all students of Conus.

The work sells for $2.00 paper bound and may be had from the editor, John Q. Burch/

A New and Unusual Helicoid Snail from Los Angeles County, California by Wendell O. Gregg- Bulletin of the Southern California Academy of Sciences, Vol. 47, Part 3, 1948. The new species is *Sonorelix (Herpeteros) angelus*.

Octopus Bites in Human Beings by Bruce W. Halsted- Leaflets in Malacology, Vol. 1 No.5, Feb. 3,1949/. An interesting account of the evidence concerning the many tales of bites by the Octopus. The effect of the venom from the salivary glands of the Octopus has been a matter of pure speculation on the part of most.

Three New Land Shells from Peru by Fritz Haas- Fieldiana-Zoology, Vol. 31, No. 23, Dec. 30,1948. Two species of Bulimulus and one Helicina are described. 6 figures.

The current issue of California Fish and Game, Vol. 35, No.1 cont--ains rather a complete paper on the Foos Habits of the Ring-Necked Pheasant by Carol M. Ferrel,Howard Twining and Norman B. Herkenham.

Among the long list of items on the Pheasants menu appear *Gyraulus*, *Fossaria* and Slugs.

A Preliminary List of Books on the Seashore,Marine Biology,Ocean--ography and Related Subjects by Joel W. Hedgpeth. Institute of Marine Science, The University of Texas, Port Aransas,Texas.

This is a mineographed list, 33 pages listing 356 books.

The Journal of Conchology Vol. 23, No. 1- This issue contains some interesting papers although none strictly pertaining to the fauna of this coast.

Some time ago we had a brief discussion about how many species of *Pleurotomaria* were known, and we listed those we could find recorded. A new species is here figured and described by J.R. le B. Tomlin- *Pleurotomaria africana*. It seems to be a beautiful shell but make no haste in preparing a place for it in your cabinet since but two specimens are known and both in African museums.

The anatomy of *Fusitriton algoensis* Tomlin by Kathleen M. White and A New South African Volute by H.J. Koch- *Volutocorbis lutosa* . The last species is exceptionally well figured with six figures .

Some of the readers of this will have both the Fusitriton and the Volutocorbis from John Q. Burch.

Another paper in this issue is On Margaritifera Durrovensis Phillips and Its Affinities by Dr. Fritz Haas of the Chicago Natural History Museum.

The San Diego Natural History Museum announces in its bulletin for Feb.,1949 receipt of 14,094 specimens by the Conchology Dept. making a total of 242,697 specimens.

Proceedings of the Malacological Society of London Vol. 27, part 6, Jan. 1949. There are many fine papers in this issue.

Mr. Tomlin continues his series of articles on Shell Sales. In the one discussed in this issue , the Stevens Sale- it is of some interest to note again another Cypraea guttata . We had some discussion and a number of reports and comments about this species after the fine specimen came into the hands of the Los Angeles Museum. It seems that many of the species that at first are reported to be represented by but a few specimens finally seem to show up here and there and not to be so exceedingly rare as they are claimed to be. Not that Cypraea guttata is not one of the great rarities but we found quite a lot of them when we started asking questions.

Schilder's paper Statistical Notes on Malacologyn is of interest. The number of living Mollusca known to Linnaeus in Systema naturae ed. 10 was 674 (1758)- in ed. 12 (1767) he had 841. Gmelin in 1791 recognized 2,504- Lamarck (1822) 3,590.

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Dwight W. Taylor- We have good reason to feel proud of the honor given our member. The following account from the news will cover the facts. " Altadena Boy, 17, Wins Right to Enter Finals in Science Talent Hunt"- A 17 year old Altadena boy whose principal interest is invertebrate paleontology today was honored as one of the 40 outstanding high school senior science students in the nation.

Dwight Willard Taylor, son of Mr. and Mrs. D. Dwight Taylor of 1955 Mendocino Lane,Altadena was named a finalist today in the Westinghouse Electric Corporations eighth science talent search. He competed with 2482 high school seniors from throughout the nation and, with the 39 other finalists, will go to Washington,D.C. next month to vie for $11,000 in science scholarships.

A student at the Webb School in Claremont, which he has attended since completing the first nine grades at Polytechnic Elementary and Junior High School in Pasadena, young Mr. Taylor has specialized in the study of fossils, making numerous trips to the midwest with Raymond Alf, Webb teacher, and to Nantucket Island, Mass., with his family. He plans to attend the University of Michigan next year. Last yeat at Webb he won the Renssaeler Polytechnic Medal for science. He also is on the staffs of the school paper and annual, is a member of the stamp club and the American Malacological Union, Last year he received a special Webb School award for distinguished service to the school's extensive museum of paleontology.

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Clifford L. Blakeslee

We were shocked to learn of the unexpected passing of our friend. While I never had the pleasure of meeting Mr. Blakeslee personally we had corresponded about shells for so many years that I was John and he was Cliff, as I know he was to the host of others who knew him.

He suffered a severe stroke on December 19 and passed away on January 23.

A letter from his coworker on the book he helped prepare just before his death indicates the feeling his freinds had for him. Mrs. Robertson writes " ... Mr. Blakeslee was so alive always that it is hard to realize that his activities are ended. He had a stroke a week before Christmas and appeared to be improving until shortly before the end came.

He did such a grand job in collecting our Niagra Frontier species

and his contribution to our book on The Mollusca of the Niagra Frontier Region is a valuable record of it. We are so glad that the book was finished in time for him to know how well it has been received.

He was a wonderful friend and we have all suffered an infinite loss".

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Mrs. Robertson reports that the A.M.U. annual bulletin will soon be off the press.

Mr. Harold R. Robertson suffered a slight stroke a year ago in Dec. 1947 and was ill for nearly five months as a consequence, but he is steadily improving now we are happy to report and is able to move about his home unassisted. He is also resuming his duties as treasurer of the American Malacological Union. He is the moving spirit in conchological activities around Buffalo, inaugurating new and helpful features, luncheon meetings at the museum where local species may be discussed during the hour, and regular sessions for the evening meetings.

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Allyn G. Smith, Berkeley, Calif. Allyn and Mac Gordon are now working on their Fusinus paper to which we are looking with great interest because this is one group that is admittedly in a state of great confusion. Not only do many of us label our shells with different names admittedly for the same species, but the usual matter of whether to be a lumper or a splitter is involved. At present and until this paper comes out I fear that I am in the lumper group. It is so much simpler. So when this paper is available my correspondents had better check the Fusinus I have been ssending them.

Allyn mentions " Am looking forward to the next Minutes which I hope will have an account of Berry's discussion on Crepidula.
* Note* While Dr. Berry gave the editor permission to make an abstract of his talk the fact that he is preparing a complete report for publication with figures etc. seemed to make it advisable to hold everything pending publication.

Dr. Coe has a most interesting MS on the morphology of this group, continuing his study of it. Hope he published it soon."

Mrs. F. T. Arnold, Honolulu, Hawaii. We have a newsy letter from Mrs. Arnold " ..Directory of Conchologists just received.." Mr. Henry Dodge of Scarsdale, N.Y. is in Honolulu and was here looking at our shells yesterday. My daughter is sorting and listing many of the Fred Lewis shells that have been sent here from the Museum in Los Angeles where Dr. Hill has had them identified for name and locality. Mr. Lewis former wife, Mrs. Conlan is in Honolulu now, having the large gift shop at " Don the Beachcombers". These shells will be on sale there and include many wonderous shells from South America. Mrs. Lynn W. Conlan is also listed in your directory. She is now in Honolulu.

Professor Louis Brand has been over many times as he is much interested in South American shells.

There is much enthusiasm here in shell collecting.

W. H. Matthews III, Texas Christian University, Fort Worth, Texas. " We are interested in exchanging fossil specimens with paleontologists and amateur collectors from other parts of the country, and in this manner building up our stratigraphic collection.

Texas Christian University is situated in the heart of one of the most fossiliferous areas of the Lower Cretaceous and we are able to offer many fine exchange specimens of this geologic age. We have found this to be an interesting manner in which to enlarge our

collections and also add to the specimens of fellow collectors.

I would like to hear from you if you are interested in such an exchange. Please let me know if there are any particular specimens you may be interested in, or if you would like a general suite of Lower Cretaceous fossils. I would also like to know what type of fossils you have for exchange, and their geologic age."

Mr. and Mrs. Alvin Bippus, Toledo,Ohio " The Bippus family is glad to receive the Burch Directory and I enclose my checque to reimburse you for our copy. After several summers of carefree vacations we are planning to wax ambitious this coming vacation and go to school. Emmy, who is on the staff at the Toledo Museum of Art, is going to take a graduate course in museum methods at U.C.L.A. While she is so engaged I want to go to school somewhere on the coast, then we'll spend the rest of the summer collecting.

I'm getting serious enough about shells now to want to learn more about the technical aspects of the hobby and am playing with the idea of taking a course or two either at Hopkins Marine or Scripps. I think a course in invertebrate zoology and perhaps a lab. course in mollusks.

Any suggestions you may have as to the best place to go or the best courses to take would be greatly appreciated."

* Note* Any of our members with definite suggestions will please drop a note to Mr. Bippus. My personal observation has been that the lab. courses have neatly avoided becoming involved in malacology. The only university I ever heard of that actually gave a full course on the subject was the University of Havana in Cuba.

A.J. Strut, Maywood, Ill. " .. the new Directory- thanks for sending it.. I am going to make a move this summer and it may be to California, don't know for sure so may see you then."

Nature Lab- 218 Lincoln St.,East Orange, New Jersey. We have a list of Preserved Zoological Material from this firm and note that they offer an extensive list of mollusks preserved, injected etc. in various methods for laboratory study.

Charles B. Wurtz, 3247 Disston St., Philadelphia 24, Pa. Note that this is a new address- the former being 5055 Copley Rd.

Cadet H. Hand Jr. University of California, Dept. of Zoology, Berkeley 4, Calif. " ...I thought you might be interested to hear that I have recently become very interested in our California land snails. I have been collecting Helminthoglypta in my spare time and have been building up a pretty good collection. Bill Ingram of Mills College got me interested in the group and he has been helping me get into them. Some time in the future I'd like to really collect this group. Right now though I have to let such spare time as I have suffice because I'm still writing my Ph.D. on the anemones. If you would, I'd appreciate it if you'd add my name to your list for copies of your catalogues on snail papers. "

E.V. Edmonds, 4665 Benevides Ave , Oakland 2, Calif. Dont know whether we listed this new address or not. Mr. and Mrs. Edmonds are now permenantly settled at the above address.

Mr . and Mrs Henry S. Young, 501 South Ave., Pittsburgh 21, Pa. We regret that we failed to place the number 8 following the names of the Young family. They are enthusiastic exchangers and have some beautiful duplicates to offer. Send them your list of duplicates They are particularly interested in exchanging for foreign or world wide marine shells.

Mr. and Mrs. Robert R. Alexander of San Diego, Calif. started on their vacation to the east when Mr. Alexander was taken ill.But he recovered and they continued their trip we are glad to report. We have a letter from them in Saint Louis., still going strong.

The Academy News Letter of Feb. 1949 names the photo on the cover " Beauty and the Beast". It is a picture of a beautiful girl who just happened to be looking at the large Octopus in the tank at the Steinhart Aquarium. Of course, the photographer mentions that the young lady just happened to be there when he decided to take a picture of the Octopus. The new big Octopus seems to be a real attraction accoding to reports. The write up is amusing- " eight armed Boris Karloff of the deep" " the talent scout who discovered the new attraction etc."

Dr. Robert C. Miller of the Academy and Dr. George S. Myers are attending the Seventh Pacific Science Congress in Auckland and Christchurch, New Zealand.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

March 1,1949

The March meeting of the Conchological Club of Southern Calif. was held in the regular meeting room of the L.A. County Museum on Tuesday, March 1st,1949. President Kanakoff called the meeting to order at 7:30 P.M. having earlier asked each member present to don the neatly printed name cards which he provided. No February number of the Minutes having been printed and Secretary Gillis unable to be at the meeting the minutes of the Feb. meeting were omitted and Mrs. E.P. Chace was asked to serve for the evening.

Committee reports were then called for-

1. Hospitality and membership. Mr. Mayhew, chairman, had appointed Morris Caruthers and Emery Chace as members. Miss Valerie Pearson was proposed for membership by Mr. Dowdle and unanimously elected.
2. Programm- Mr. Grau, chairman was reported in the hospital and unable to attend or send in his report.
3. Nomenclature- Mrs. Chace,Mr. Burch, Dr. Gregg. Mr. Burch reported the publication by the California Academy of Sciences of the long promised paper on West American Conus by Dr. G. Dallas Hanna and Mr. A.M. Strong. An excellent paper as was expected of its authors and well illustrated. If interested in these cones better order this promptly (either from John or from the Academy, price $2.00)
   Dr. Gregg brought in a new bulletin of the Southern California Academy of Science which included the formal publication of Sonorelix (Herpeteros) angelus Gregg, from Soledad Canyon. This is especially interesting as neither the subgenus nor the genus had previously been reported from Los Angeles county.
4. Education committee- chairman, H. Turver. No formal reports to be made but members present tagged and active.

Mrs. Burch reported that about 25 persons enjoyed the field day at Dana Point on Feb. 23rd. Some good collecting was done and a master list of species collected is being compiled.

Dr. Gregg had a letter saying that Dwight Taylor had received a Westinghouse Science Award including a trip to Washington,D.C. for an essay on Mollusca of Claremont, California neighborhood. The club is glad to congratulate Dwight and hopes for a fuller account of his achievement.

It was reported that Dr. Thomas A. Burch was ill in New Orleans but will come to Los Angeles as soon as he is able to travel.

Under " Good of the Order" a suggestion box was set up, and President Kanakoff presented a suggestiòn made by some one too bashful to be identified that the ' old timers' make their informal discussions audible to the newer collectors and not too many talk at one time.

The club then settled down to enjoy the program of the evening, a talk on " The juvenile, an important stage in the growth of Mollusca" by Dr. Arthur Howard. At the close of Dr. Howard's remarks he showed a number of slides and other screen illustrations of his talk and closed the series with a most astonishing tray of small shells collected at Santa Cruz Island in 1940.

They were Pteria viridizona Dall, previously known only from the type lot collected near San Pedro by the late H.N. Lowe.

About 25 members and guests enjoyed the program and adjournment was after the usual manner. Respectfully submitted,
Elsie M. Chace, Sec. Pro. Tem.

Some notes from Dr. Howard's talk will appear elsewhere in our Minutes.

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We are sorry to learn that Mr. E.P. Chace's father who resides in Redlands has been quite ill.

Miss Edna T. Cook, 11874 Iowa Ave.,Los Angeles 25,Calif. " ... I have not been away from the house except as a friend has taken me in her car to the doctor. Friends do my marketing and other errands so I manage to get along. Wish I might join you in your excursions to the beaches. How I miss the trips Miss Waterbury and Mrs. Clark and I used to take. I thought when I moved here I should be able to at least take in some low tides but have not set foot on the beach since I got here."

Dr. Earl Herald, is the new Curator of Aquatic Biology in charge of the Steinhart Aquarium, California Academy of Sciences, San Francisco, Calif. Dr. Herald came to Golden Gate Park from 14 months duty in the Philippines as Aquatic Biologist with the U.S. Fish and Wildlife Service. Dr. Herald is a graduate of U.C.L.A. and then took his Masters degree at Berkeley and his Doctorate from Stanford. While his duties at present seem to be with the Aquarium he has many friends among the local shell collectors and was at that time very much interested in conchology.

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA-Feb. 1949

Twenty seven members of the club and visitors were present when Mr. Kanakoff called the February meeting to order. The minutes of the January meeting were read and approved.

The names of the Educational Committee were posted and after some discussion the committee promised to help the new conchologists by preparing a chart of the super families.

The new tide book covering the West Coast, price 25¢ is now obtainable. The committees had no special reports.

The program was in charge of Mrs. John Q. Burch who read a paper " Shell Collecting" by Dr. Thomas A. Burch M.D. The paper contained much interesting information and Mrs. Burch gave a running comment from personal experience. Shells illustrating the points in the paper were provided by Mr. Kanakoff. Mrs. Burch brought her collecting paraphanalia which consisted of a long handled wicker basket, sharp knife, sieve,pincers,magnifying glass, several small bottles, small bottle of grain alcohol and oblong pieces of plastic with tape attached. The latter is dampened for use in wrapping chitons. A square glass with a hole in the center through which a drop of alcohol can be dropped into the center of a starfish is an excellent way to care for them. Other suggestions were - a long handled spoon, a garden fork and a cloth for catching small specimens rubbed off rocks. Note- after turning over a rock, return it to its place as a conservation measure. We

too often forget. Having articles painted red helps in locating them. In cleaning shells, fish hooks straightened , crocket needles and barrel cactus thorns were recommended.

The paper and discussion was most helpful in preparation for our field trip, Sunday, February 13th at Dana Point, meeting around noon at Doheny Park. Mrs. Burch ended an enjoyable meeting by giving each member a specimen of Cardium unedo L. from Zamboanga, Philippines collected by Marshall Sohl, one of our members now in Zamboanga.

Respectfully submitted,
Harriette Gillis

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The New York Shell Club

The following note from Morris K. Jacobson is interesting. " Just a word about the New York Shell Club. Organized Feb. 27 and Jan. 30 with about 20 charter members. First shell club hereabouts in years. We have been meeting in the American Museum of Natural History and usually try to meet the last Sunday in the month at 3 P.M. Outstanding events so far have been the excellent talk on radulae by Fred Toblenan of Newark, who also brought along scores of his perfectly mounted slides; members realized then that the shell itself is not always the most beautiful thing connected with the gastropods. Another event has been the display by Anthony D'Attilio of the rarest jewels in his collections, chiefly a perfect specimen of the rarer and costly Thatcheria mirabilis Angas from deep water off Japan. Last meeting Mrs. Entwisle of Nutley, N.J. showed us a beautifully mounted set of marine fossils which were recovered from under the bed of Lake Okeechobee in Florida, when that lake was drained some time ago. At every meeting so far sets of shells were brought in and distributed, last time some unusual urocoptids from Las Villas province in Cuba. We plan further shell displays, talks, shell exchanges and distributions and shell trips. All people who are the least interested in shells are invited to attend out next meeting , Rm. 129 in the American Museum on March 27 at 3 P.M. Officers are Dr. Walter H. Jacobs and Morris Kl Jacobson. People who wish to communicate with the club should write to the latter at 455 B 139 St., Rockaway, N.Y.

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Mr. Jacobson mentions that in error I listed the number 7 following his name in the Directory. It should have been an 8. He is interested in exchanging but not in selling shells.

Miss Catherine J. Young- Lancaster, Ohio. " I have been spending the winter in St. Pete where I am temporarily working and seeing Florida in my spare time. I expect to return (reluctantly) to Ohio next month. In the meantime I have been thrilled to be among people interested in the shell hobby and I joined the St. Petersburg Shell Club and here made many new friends and met many conchologists, among them Julia Ellen Rogers and Miss Ruth Coats, both of whom gave me a vivid (& complimentary) description of you..."

John Wendell Bailey , Richmond, Virginia " I am back in the Army now, but am passing the Directory on to an interested friend here in Richmond"...

Miss L.L. Doolittle, Newville, Pa. Miss Doolittle is 77 years of age and lives in the Manor House at Newville. We find the photographs of her working with her shells cheerful and interesting.

Dr. Harald A. Rehder, U.S. Natl. Museum " Many thanks for sending me a copy of your most recent Directory of Conchologists. We here at the office find it invaluable.. We will certainly keep you advised whenever we run across an interested worker not listed."

Dr. Paul Bartsch, U.S. National Museum " Many thanks for the Directory of Conchologists 1949. I am pleased to have this. Then my compliments on your Minutes. They are always a refreshing element. I never fail to read them from cover to cover. May you live long and prosper."

Ralph O. Fox, 1048 Monterey Ave., Berkeley 7, Calif. " Was glad to see the Western Branch meeting in Long Beach in June. I am planning on spending a week down there at that time. I shall want to see all of the collections of note around there. If anyone from the Academy drives down perhaps I may join them, otherwise S.P.

Enclosed find a copy of our " Press News" .. Our shell friend Fox has many gifts because he is one of the editors of this issue. The item of interest was an offer from a firm in West Africa to ship shells from Africa. It happens that I wrote them several times answering their offers and was promptly quoted shells by the"bale" The suggestion that I would perefer to pay more for a few good ones properly handled than to buy beach shells by the ton apparently put me in my place as just a small operator which is, of course, true.

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Some back issues of the Pacific Islands Monthly contain a few items of interest:

" The Queensland Government intends setting up the culture-pearl industry. There is at present a world market for pearls, and the government is anxious to exploit it. The proceeds of the industry will be used for the benefit of aborigines employed in the industry"

Price quotations on shells - commercial species are of some interest- for example Green Snail Shell £100 in store Sydney. Market in chaotic condition; no orders being received." As I figure this one it means about $400 per ton F.O.B. Sydney or 2¢ per lb. One of these big Turbos will weigh several pounds and the freight would certainly add anohter $100 to the cost- and the chances of getting one specimen shell out of 100 would be slim. Guess we shell collectors had better leave those to the button makers.

Another one though has always been an annoyance to me " Pearl-Shell" £200 per ton. I said annoyance because as a dealer in fine shells I know that many collectors would like to have fine pairs of these shells. So I tried a small shipment once and found that I could charge that up to experience because there would not be even one single valve in a ton of this material that would be of the slightest interest to a collector. And I have also wasted a good many stamps trying to interest someone in collecting some good specimen pearl shells of large size, both valves unchipped etc. but apparently if you dont want a ship load you are too small to be bothered with.

And another note or two about the Achatina fulica matter-

" The giant snails which were released by the Jap Invaders as a source of food in New Britain, New Ireland and the mainland of New Guinea, represent a problem that has not been solved. The infestation had spread so far through the jungles before its character and menace were recognised that it now seems unlikely that it will ever be brought under control. Like the Lantana of Eastern Australia, it will remain as a permanent curse to the blundering men who brought it in. It has been found that the snails can be wiped out effectively by a " snailkiller" prepared by a well known Australian manufacturer. But this method, of course, calls for direct application of the preparation to the snails at their haunts. The Japs took the snails, also, to various Pacific Islands now in American occupation, where they are threatening to

overrun various districts including the island of Saipan. An American mission is being sent to Africa to seek a method of controlling the pest- which is a native of Madagascar. The snails nearly got into the United States. Large numbers were found just in time, embedded in mud, on a shipment of cast iron about to be loaded for America.

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LONG BEACH SHELL CLUB- Field trip of the Long Beach Shell Club. Mr. and Mrs. Fred E. Barnett acted as hosts to the Long Beach Shell Club on their first field trip in Alamitos Bay. They were assisted by Mrs. Leona Linderman and Timmie Barnett. After a picnic lunch the group went shell collecting in the bay. Many different species of shells were found. Several teachers in the Long Beach schools brought their pupils who were interested in the shells and marine life in this area. Guests were Mr. and Mrs. Cook of San Diego, Mr. and Mrs. Galbraith of Pasadena, and the above mentioned students who were guests of Mr. and Mrs. Claude Lehman, Miss Ruth Rex and Miss Helen White. Shell jewelry was on display, the ear rings and pins were made by two young ladies who were guests of Mr. and Mrs. Turver.

Mrs. Barnett's article on shell collecting in Alamitos Bay is one of the feature articles in the book " Shells and Shell Collecting" by the Long Beach Shell Club. The article contains a detailed map of Alamitos Bay, showing the favorite collecting spots.

There is always the favorite story of the big one that got away and it is rumored that one of the members took a mud bath while c chasing the elusive Gaper Clam. Mrs. Bormann is completing arrangements for an exhibit of shells for the main Public Library. The exhibit will be on display during the convention of the " American Malacological Union", Pacific Section, to be held in the Municipal Auditorium June 10-11-12. Anyone interested in the convention may contact, Mrs. Bormann, H. Arden Edwards, or Mr. Turver.

Mrs. Bormann wrote in her personal note " ... grand collecting trip about 30 to 40 shell enthusiasts, 4 new members.

Georgia and Bill Ulrich are back and they look fine. Mr. and Mrs. Cook are visiting a daughter near Mary Ann.

* The dinner for the convention is set for Saturday night, June 11th and if possible we would like to get a line on the number of those who are interested.

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Dr. Howard R. Hill, Curator of Zoology at the Los Angeles County Museum told of a fine gift to the museum collection. " You asked me for some information concerning the recent gift to the L.A. Museum of a fine collection of Western land snails donated by Mr. M.L. Walton of Glendale.

There were 942 specimens in the lot, representing 65 different species and 10 genera. The number of different species in each genus is as follows: Monadenia 8, Helminthoglypta 5, Ashmunella 5, Anguispira 1, Holospira 2, Sonorella 5, Allogona 3, Triodopsis 3, Haplotrema 2, Oreohelix 31. "

Dr. Hill enclosed a list of the species and the localities. They include a great many genuine rarities and if space permitted would run them here. We may do so in another issue.

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MINUTES 89
MARCH-APRIL
1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Phone Ax 3-5710-Home phone
Ax 2-7965

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Walter J. Eyerdam, Seattle, Wash. Dear John: I am sending you a couple of interesting letters from my missionary friend, the Rev. Fox which I should have submitted to you for publication in the Minutes long before. I also loan you four of my photos of the well known Mrs. Kuper and her family and of Mrs. Campbell, wife of the Scotch governor and planter of San Cristobal Island. Both of these native women are mothers of children of white fathers that took enough interest in their children to give them good educations and have done much for the islanders, Mrs. Kuper was a native princess of the exceedingly interesting native tribe on the little island of Santa Ana (native name Owa Raha) visited by Alvaro Mendana de Neira in about 1520. Osa Johnson spent about a year with the Kupers on her honeymoon. The Rev. Fox performed the wedding ceremony for the Kupers. Mrs. Kuper, daughter of old king Bagga-Bagga eloped with the German sea captain when she was about 16. At that time the natives on the nearby San Cristobal island and on Malaita or (Mala)

Subscription [illegible]

We are now [illegible]
at the Los [illegible]
All interested [illegible]

Visit [illegible]

William J. [illegible]
of interest [illegible]
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on her [illegible]
the [illegible]
[illegible]
natives on the [illegible]

were still cannibals. In 1930 while the members of the Whitney South Sea expedition were collecting birds and shells on Santa Ana as guests of the Kupers he regaled us with many tales of his interesting experiences among the natives."..

Letters from Rev. C.E. Fox to Mr. Eyerdam:

" I got your first letter and not your others till this one of July 25 which arrived Oct. 10. Possibly it was because I went to Sydney a year ago for a major operation (couldn't pass water) which the doctor said was 100% successful (he was a wonderful chap) and anyhow I am very well now- just 69, but still can walk 30 miles and not be tired except pleasantly. I am now on Malaita 5 miles from Auka. I still play football, may stop at 70.

Your letter was very interesting indeed, glad we have no bears about 10 ft. high. Your work too is fine but it amazes me to earn 2000 dollars in 3 months, my own pay being 300 in a year. This is my 46th year here. That article on Havi Pogo showed considerable imagination. Kuper is well and so are the boys. Geoff with his father. Clara just married. It is fine to be able to help your folk in Germany.

The Solomons had a rough time in the war, and since has been in troubled waters. Some anti-British Americans started " Marxes Rule" (Now Marching Rule) among the people on Mala and it spread like a fire, the slogan being " all British to go". About 90% in all the islands became members. They set up their own chiefs, police, laws (very severe- thrashings for slight offences, beheading with axe and block for others) and refused to allow any Govt. official to land. Drove the Commissioner on Mala out to his neck in the sea where police rescued him- then Govt. at last took action- they went out NW where MR hadnt yet reached and recruited a large number of police and armed them with rifles and machine guns. Three warships and a plane carrier came down and there was a great round up and about 200 leaders now in gaol. No one yet knows what the reaction will be. Govt. opinion says it will kill MR- native that it wont. I came over here to live among about 600 MR. Mission and Govt. people said I wouldn't be allowed and I brought over 4 Gela men to help settle in, in case these people wouldnt help , but they all turned to and carried my heavy stuff up asking no pay and then 40 of them turned to again and built me a fowl run and house. I have started a class of men an hour a day learning basic English (more to join but 20 is big enough class). They've given me land for a garden; they are very friendly. About a score of them I taught as little boys, so maybe that helps. The sad thing is MR can't succeed, they are not ready for self government yet, another 20 years they could be. They are still too divided and inexperienced. And if it fails they will have a sense of frustration.

As regards shells I had about 1500 species about half names when I went to Sydney. They were in a woired native house. Someone broke in, took all the best, jumbled up things including the labels. Second time it happened when I was away. I've started again with what is left, but lost a bit of enthusiasm, but I would be glad to send some to you if you would name them; I could number them. Many or a fair number Powell can't give a specific name to. Some of the Placostylus his specialty he says, are new. So that is how things are. But I hope when my boat is mended to get about a bit. I am still quite keen to get the blood color Cypraea of Ngwalade (S.Mala) and the green Placostylus. All the boys say they exist.

Glad you have a genus named after you. My American friend Dr. Mann when he was with me on San Cristoval named a species of vicious little ant after me. I hope Eyerdamia is beautiful. I know Rennell and Bellona well. My work is languages. My dictionary of Arosi (San Cris.)

has 30,000 words. My Lau (Mala), not so many. Gela I am doing now has so far 12,000 and the grammars and folk tales in the languages. But there are no funds to print any of this, of course. I expect you read my book Threshold of the Pacific (Keegan Paul) and also Introduction to Oceanic Languages or perhaps I should say , began to read them, few get through. Now I am writing philological articles on Oceanic languages (Indonesian,Melanesian,Polynesian) for Polynesian Journal of New Zealand. It is all very interesting though you may not think so.

Solomons are very cut off now. No steamers from Sydney, no copra. (Occasional small boats from Fiji. Few mails. Stores very hard to get and very expensive (tea 10/ a lb etc.). However, I'm happy here. It would be a great pleasure to hear from you again. The American troops sent me a published book of beautiful photographs of stations here and native scenes. I had lots of pals among them when they were here."

Letter of Sept. 10,1948

" Your letter of May 15 reached me last month and in case you do go off in November I must write at once,even so it may be too late. I didn't realize before. I am surprised old age pension isn't general in the U.S.A.. In New Zealand everyone gets it, and my sister lives on hers. It sounds very cold where you are. I hate anything below 80 degrees now. It was a fine piece of work sending 300 packages to Germany. I wish I could have done something. All I have been able to do is to send some shells to Germans who lost their collections. Your wife would be interested in our mothercraft school a mile from here, where two good nurses train Mala girls to look after babies. Two of my nieces in New Zealand do that work, trained by a New Zealand doctor named Truby King.

I am just back from a 1000 mile trip in the " Southern Cross" to outlying islands- Santa Cruz, the Reef Islands, Utupua,Vanikolo, & Gikopia. On the way back we called at Santa Ana, Ugi, and South Malaita. At Santa Ana the Kupers came on board to dinner and we went ashore. Kuper is bent and white-haired and Charlie runs the plantation. Kuper is wrapped up in his little grand daughter, a lovely little girl, Charlie's daughter. Geoffrey is manager of Fera plantation on Ysabel. I saw him there not long ago and baptised his baby. You know that he went to school in New Zealand and became a very good footballer and cricketer and then went to medical school at Suva and became a " Native Medical Practicioner" but he has now given that up. I got some land shells at Santa Ana, that Placostylus which when alive is a brilliant green (it has a sort of a green cloak on its back within the shell) and others such as Crystallopsis and others whose names I know not. On the trip I had little time for shelling as there were other things to do. I had a day on the big reef at the Reefs where Mauritiana and Isabella were abundant but few cones. I got a Melo there I had not found in the Solomons. At Santa Cruz I got the fat little brown Placostylus and some Papuinas and others. At Utupua and Vanicolo a white Placostylus . At a river in Santa Cruz many Melania and Neritina longispinus and brevispinus. At Tikopia I could find no land shells. On South Mala I went to where the blood red Cypraea is said to be (buli abruabua) but they said none had been seen for a long time, but they will look for it. On the whole I believe it does exist. I got there two Cypraea new to me, however, medium size, brown, long, brown spots around the lip, unlike any of my 35 species and a Pustularia new to me and other ordinary shells like Cymbiola (I have quite a lot of Cymbiola rutila).

Now I am going away again to Ugi for 3 months to finish my Gela dictionary with a Gela man there. I should get good shelling.

My Gela dictionary has 15,000 words so far, the same as my Lau ((Mala) one, but my San Cristoval one has 25,000 words of the Marou Bay language. I hope to spend my 70th birthday there, with Communion in the morning and a game of football with the boys in the afternoon.

We called on Mr. Campbell. He is very well and quite distinguished looking with his white hair. The two boys run the plantation and I think he is doing well with copra £42 a ton. His trouble was labour, owing to the anti-British movement, but we brought him 30 Reef Islanders on our ship and he was very pleased.

Tahoa and Tapongi are both dead. I spent happy times on Rennell paddling across the lake, but the powers that be decided only one mission SSEM (Deck) should go there so we retired and I have seen them no more and don't know how they fare.

I got a different species of Placostulus on that trip. On Ugi I got a land shell I don't know, the mollusk of which was very handsome, a bright scarlet and too big for its shell, crawling about on the green foliage.

I am sending all these land shells next week to Mr. Powell at the museum in Auckland to be identified and also 500 of my marine species. I only have 400 identified so far by Powell, Joyce Allan in Sydney and Burch in California, but of many species I only have one. But Powell will identify and return these. I am also sending him a number of living Placostylus in a box. Joe Doraadi and I have learned their habits and food and Joe is going to Auckland as one of the crew to look after them. Also some eggs we hope will hatch on the way. On South Mala I got some living Kuphus arenarius and am sending two to Auckland.

I always refuse to exchange shells because in my small house I only have room for my Solomon Island shells, but I like to give them and am sending off many cartons this week, only the postage is a bit heavy. But a friend in New Zealand is going to send me some New Zealand land shells and so is a friend in Tanganyika some African land shells. The numbers are not so overwhelming.

There is still great unrest here (the Communist movement) and passive resistance to Govt. and hundreds in gaols. But they are as keen as ever on their church and kindness itself to me. I suppose because after 47 years among them I am almost part of the scenery, so to speak. I like them all, good or bad and hate to see them in trouble.

A friend in America wants Santa Cruz feather money and Solomon shell money so I am sending him it in return for dictionaries and grammars of Indonesian languages (Dutch) which are my tools for language work.

And now I have tired you out. Good fortune to you if you go on the ship; and best wishes to your wife who I feel must be a woman I should deeply respect."

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Dr. L.K. Darbaker . I shipped shells to Dr. Darbaker in January of this year continuing a steady correspondence of many years, and was grieved to receive the following letter " Dear Mr. Burch: Kindly take the name of Dr. Leasure K. Darbaker, of the University of Pittsburgh School of Pharmacy, from your mailing list. Dr. Darbaker died February 6,1949. "

Dr. Darbaker was an enthusiastic student of conchology for many years, and his host of friends will grieve his passing.

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Dr. G.E. MacGinitie, April 14,1949- " Within a short time my wife and I are leaving for Point Barrow where we expect to spend at least a year. I shall appreciate it if you will send your literature to Arctic Research Laboratory, Box 1310, Fairbanks, Alaska.

Richard N. Gregg, 8 Wheatfield Gardens, Belfast, Northern Ireland. " Dear Sir: I have been giving a considerable amount of study to your Directory of Conchologists for some time past, and now I am writing you to offer for sale representative species of the Irish Land,Freshwater and Marine Mollusca, and also land and freshwater mollusca of Yorkshire,England.

I am a member of the Conchological Society of Great Britain and Ireland and am a keen worker. I have many hundreds of specimens for sale- collectors duplicates- including a great number of local and seasonal varieties, and would be very glad to hear your requirements and quotations.

By the way, are you interested in the radulae of the mollusca for the ultimate purpose of mounting as microscope objects? I can give you a good selection of many different species should you be interested in this.

Should you be interested in entire snail bodies, this can be arranged; specimens can be formalin preserved. Are you interested in unborn Vivipara ? Or the entire pregnant bodies of this most interesting and unusual viviparous genus? "

*** Note*** I ran Mr. Gregg's letter here thinking that it would be better for those interested in anatomical work etc. on these species to deal directly with Mr. Gregg rather than through me as a dealer. I will very probably carry in stock the shells alone but handle very little ' wet merchandise'.

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Dr. Gunnar Thorson, Zoological Museum, Krystalgade,Copenhagen, Denmark - has joined the staff of the University of California(s Scripps Institution of Oceanography as a visiting professor of zoology.

Jose Domantay, Philippine Fisheries Department, is now taking courses in the University of Southern California and is making a special study of Holothurians.

Maxwell Smith, Winter Park, Florida " I am very grateful indeed for your kind invitation to visit you when in California this coming summer. Plans are not complete yet but I hope to drive as far as L.A. Have been looking at trailers and may get one to use just for the summer. Would like to take some pictures in the Yosemite and Yellowstone, also run down to Guaymas for a short visit."

Mr. A.S. Koto and daughter Adele after spending the winter at Marathon,Florida returned working up the coast of Florida to their home 1421 Roosevelt Ave., Beloit,Wis.

Mr. Wm. G. Fargo has returned from his winter home is Pass-a-Grille Fla. to his home 506 Union St.,Jackson,Mich.

Mr. J.S. Gaylord after spending the winter in Florida at St.Petersburg has returned to his home East Longmeadow,Mass.

Mr. Heathcote M. Woolsey after spending an interesting winter collecting and trapping on Jamaica has returned to his home in Kent, Conn.

Daniel L. Emery, 121 Twentieth Ave., South, St. Petersburg,Fla. Mr. Emery sent in a very interesting newspaper clipping showing his photograph and quite an article. His letter will explain it briefly. I am reminded of some of the problems of the California Hostory and Landmarks Society of which my wife is a member.

" We are just now having a lot of discussion over the spot of landing of De Soto and Hernandez on our shores. As I was looking around for small snails a few years ago I found a small brass cannon ball and knew what it was. I kept it for 20 or more years and when this discussion came up I wrote John C. Blocker our County Historian of exactly the place it was found and it proved his theory. Mr. Blocker is now having it out with the Historical [illegible] 15, 1941.

[illegible]

Dear Sir: I have been [illegible] history of Connecticut [illegible] writing you to offer for sale [illegible] [illegible] Translations [illegible] Lectures on Telepathy, England.

I am a member of the Connecticut [illegible] and England [illegible] collections [illegible] the seasonal varieties, [illegible] of Translations.

By the way, [illegible] for the ultimate [illegible] life for a good education [illegible] be interested in this.

Kindly let me know [illegible] different specimens [illegible] assistance and [illegible] see because I [illegible] within the [illegible] desired directly [illegible] I will [illegible] very truly yours [illegible]

[illegible]

[illegible]

Society.

Oh My,My- How we do miss our Mr. Bower. A man who was always ready to go along with those who asked, to hunt shells and his knowledge about our local species was all that could be desired. But that is the way with us, here today and missing tomorrow.

I lately got hold of a very fine egg case of the Argonauta, a little over 4 inches long and as perfect as it could be. I consider it a very fine addition to my collection.

Had a nice visit from Dr. Pilsbry a few days ago, told me he was 86, 2 years younger than myself. Told also that his daughters are now in Lima,Peru and he is going to make that his home."

****

William J. Bower- July 3,1870 - March 22,1949

A host of old friends will grieve the passing of Mr. Bower. While it is proper that St.Petersburg should claim him because he made his home there for the last years of his life, he spent some time in California and was a member of the Conchological Club of Southern California. Time changes not only our companions but even places. I sit back and recall with pleasure several trips I made in the company of Mr. Bower to what was then one of our very best collecting spots for estuarine species- Point Mugu. Together we collected many fine species there. I recall in particular the very fine and unusually large Sinum scopulosum (Conrad) and have seen none taken since that time as large. But now Mugu is the U.S. Navy's Directed Missile Base or some such thing and even if one were a pal of the admiral our old stomping grounds have been changed to such an extent that it is doubtful if much remains. Concrete walls and neatly dredged channels do not remind me of containing much of the fauna that formerly had heavy eel grass and broad gradual banks. Mr. Bower was also one of our pioneer collectors of the West Mexican species at Guaymas, and true student that he was he brought back many of the small species usually overlooked by collectors. I recall that he gave me a number that I could not classify at that time. I have forgotten the year that he spent at La Jolla, but recall visiting him there and also recall the occasions when he visited me at my hotel in San Diego when I was making business trips to that city close to his winter home in La Jolla.

So Mr. Bower left good friends to grieve his passing both in California and Florida.

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Allyn G. Smith, Berkeley,Calif. Allyn has been turning out an amazing lot of fine work recently so I can't very well complain that he let himself get sidetracked on his chiton work. However, he promises to get back to it soon. Of course, those of us who have made any effort to unravel the puzzles in our Ischnochitonidae may secretly suspect that when he reached that group the time was very approriate indeed to find other matters of pressing importance. But whatever he did with that batch would be an improvement.

Allyh continuos to collect as well- what a man " Doc and I may spend a week on the Farallones for the low tide series beginning May 6. He will probably go anyway. My own plans are uncertain on this yet but I am hoping I can make it."

Dr. Jeanne S. Schwengel, Belford Rd., RFD 4, Greenwich,Conn.

We had expected Dr. Schwengel to pay us a visit in Southern California this spring and are disspappointed to hear that the visit will be postponed until later in the year.

Mr. Wm. Holved of Nassau,Bahamas and of New York City paid us a visit last week which we enjoyed very much indeed. He spent a large part of the afternoon telling me and Bill Ulrich who happened to be in about his experiences in the Bahamas.

STARFISH CLEANING PILINGS AT BEACH ASSIST TAXPAYERS- Los Angeles Times, April 22,1949- " Starfish at Santa Monica are starring in a new role, that of taxpayer's friend.

Harbor Master Pat Lister said yesterday that hungry starfish are hungrily eating barnacles,mussels and assorted sea life, that most of the $1400 appropriation for cleaning pilings of the Municipal Pier probably will be used for other purposes.

Starfish in unprecedented numbers have been attaching themselves to the pilings, and already they have stripped more than half of them clean."

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- April,1949

The club gathered at the usual time and place and were quite resplendent with our new pins. The membership committee presented the names of Mrs. Geo. P. Kanakoff and Mr. and Mrs. P.V. Kloss, who were welcomed by the club.

Mrs. Burch reported plans for a field trip, May 15th at Palos Verdes, when there will be a minus 1.1 foot tide at 5:33 A.M. Those able to go will kindly get in touch with her.

Communications have been received from Mr. Pest of Florida and Mrs. Effie Clark of Yuba City. It is always a pleasure to hear from former members.

There was some discussion on the problem of sending cards to those who do not show enough interest in attending meetings, but no motion was made, it being hoped that those who no longer are interested will notify the secretary, who will send cards to those unable to attend but are known to be interested in the doings of the club.

Mr. Gilbert Grau made the motion, seconded by Mr. Morris Caruthers that Dr. A.M. Strong be elected Honorary Member of the Conchological Club of Southern California. The motion was unaninously carried. According to the constitution of the club, persons ineligible to active membership who have contributed valuable aid to the study of conchology, and particularly those who have aided in the study of West Coast shells can be elected Honorary Members. The club felt it was especially fitting to so elect Dr. Strong.

The speaker of the evening was Dr. Thomas A. Burch, home for a short period from his research work with the U.S. Health in Guatemala. It was a great pleasure to see and hear Dr. Burch again. He told of the difficulty in collecting land snails in Guatemala,due to high altitudes, jungle growth,not to mention slides, difficulties of language and the extreme in difference of the natives. Patience and pennies procured some specimens, which he showed and then we enjoyed some colored slides of the country and people.

The twenty eight present wished more could have enjoyed the meeting. Respectfully submitted, Mrs. Harriette Gillis,
1904 N. Madison, Pasadena 6.

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Mrs. W.J. Risley Jr., 418 Maple Ave., Glenside,Pa. April 16,1949
" Thank you for mailing the 1949 Directory of Conchologists. Enclosed is a check for it.

My sister and her husband, Dr. and Mrs. L.N. Lindsey of Forsyth, Illinois, and Mr. Risley and myself are going to Sanibel Island on the 24th of this month. We hear the shelling is not good, but we are hopeful. It seems the effects of the ' red tide' are still being felt.

Mr. Risley and I tries a little shelling at San Francisco last October but were not very successful. Had a thrill one day of seeing sand dollars come in by the dozens all around us. (con)

We are going to San Francisco,Portland and Seattle in June. I hope we can find some place where we can go to a beach as we did at San Pedro and pick up enough shells to be proud of them. We did enjoy your sending us there and we appreciate it more every time we open our cabinet.

Do you know of a good shelling beach close to either Portland or Seattle?

*** Note** There are countless fine collecting spots around Seattle- Alki Pt.,Port Orchard etc. but suggest you phone our member Walter Eyerdam and get expert advise. But, of course, there is nothing close to Portland other than land and freshwater, but drive to the coast and there is some collecting but my experience has been to find it rather more difficult to get worth while things along that part of the Oregon coast.

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MAY PROGRAM OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

The speaker will be Jack Dowdle and his subject " Collecting in New Guinea".

****

PEARL SHELL

In looking through the Fisheries Newsletter from Australia for Feb. 1949 there is a short article on the pearl shell industry. Several items seemed to me to be of some interest- and the dangers involved seemed surprising- "Lost the whole of the crew of 10 men of the A.S. Male and Co's auxiliary pearling vessel " La Grange" ; also loss of 5 divers, one accidentally drowned in the diver's dress and four from diver's paralysis. (* Note* I wonder what diver's paralysis is ? same as what we know as bends maybe ?). A.S. Male and Co. also had the misfortune to lose the auxiliary pearling vessel " Ibis". Both vessels were lost at Melville Island...."

In spite of all of this they report the take of pearl shell is up 46%- and the prices for it is interesting- £ 600 per ton F.O.B. Broome. Of course, I know nothing whatever about the commercial pearl shell business- Mother of Pearl I think they call it at times but these prices in ton lots mean better than a U.S. $ per pound and that on the other side of the earth. Obviously I have not been allowing my correspondents enough for those sent me for shells nor for that matter charging my customers enough for them. Obviously a good pearl shell which will weigh a couple of pounds is worth several dollars just as something from which to make buttons or what do they do with them.

****

SOME NEW PUBLICATIONS RECEIVED

Nautilus, Vol. 62, No.3, Jan. 1949/ Of particular interest to us on this coast there are two items in the Notes and News- Notes on the Nomenclatuure of Two Marine Gastropods from the Galapagos Islands by Hertlein and Strong- and a note on Drillia roseobasis by Dr. Pilsbry - Monterey Mollusca: Correstions by Allyn G. Smith and MacKenzie Gordon Jr. and Aestivation in Helminthoglypta traskii phlyctaena (Bartsch) by Dr. William Marcus Ingram.

There are a number of papers up to the usual fine standard of the Nautilus but none pertain directly to the fauna of this coast unless perhaps one may consider the paper by Robert J. Drake " Mollusca of the Eastern Basin of the Chaco River, New Mexico."

****

Occasional Papers on Mollusks- Dept. Mollusks- Museum of Comparative Zool. Vol. 1 No. 14 Jesse Wedgwood Mighels with a Bibliography and a Catalogue of his species, by Richard I. Johnson.

Etudes Sur L'Anatomie Et La Systematique Du Genre Eremina (Gasteropodes Pulmones) par C.M. Steenberg ! Editees par G. Mandahl-Barth 1949- Det.Kgl.Danske Videnskabernes Selskab- 28 pages of text and 10 very fine plates.

The American Malacological Union- News Bulletin and Annual Report 1948- Membership List Revised to March,1949.

Mrs. Robertson is again to be congratulated on the very fine report just received. 36 pages and covers. All papers given at the Pittsburgh meeting as well as those at the meeting of the Pacific Division are outlined. This is no mere report but a paper that will certainly be referred to and cited. It should be properly filed in all conchological libraries.

Shell Notes by Frank Lyman Vol.2 No.6- Many will enjoy seeing Frank and Vera in person- their photographs are in this issue and really good pictures.

Frank mentions collecting coral in this issue. Of course, coral is beautiful and a collection of coral is very much worth while, but I was a bit discouraged when I saw the collections in several of the best museums. They of course, had dyed them beautiful colors, and I was assured that the color of the dyed coral was the true color when living. Now I am not much disposed to favor anything pertaining to ' nature faking' but feel disposed to think that perhaps it should be justifiable to dye coral to resmble the living, because as it comes to hand after cleaning with the exception of a few species of the red and pink the coral is snow white.

I know nothing about dying coral or anything else for that matter having no hair left to dye unless you count the fringe. If anyone knows the proper kind of dye and proper colors and methods to make coral resemble living coral we will be pleased to hear from them.

Frank also mentions having natural pink Angel Wings for sale. I have heard of this rarity but have never seen a pair of them. Bill Ulrich collected some in Florida this winter but I haven't seen them.

Report of the Committee on a Treatise on Marine Ecology and Paleontology 1947-48 - Division of Geology and Geography National Research Council- Washington,D.C. Harry S. Ladd, Chairman. This is a very valuable contribution 117 pages.

Of course, the entire volume is of great interest but naturally largely devoted to consideration of the fossil. However, one paper in particular is of very exceptional interest- Ecology of Living Nautiloids by H.B. Stenzel. This paper should be indispensible to any student of this group.

EASTERN PACIFIC EXPEDITIONS OF THE NEW YORK ZOOLOGICAL SOCIETY XXXIX MOLLUSKS FROM THE WEST COAST OF MEXICO AND CENTRAL AMERICA Part VI by Leo George Hertlein and A.M. Strong-

This part has just come to hand and covers the Superfamily Veneracea. 38 pages and 2 plates. The usual careful work of the authors is evident with extensive fine keys to genera, subgenera, and species.

****** NOTE ***** Heretofore many of our members have had difficulty in obtaining copies of these reports. The editor has arranged with the authors to order a limited number of separates of each issue and those wishing them may have them by writing John Q. Burch, 1584 W. Vernon,Los Angeles 37. 50¢.

AMERICAN MALACOLOGICAL UNION
PACIFIC DIVISION

The second annual meeting of the American Malacological Union Pacific Division, will be held at Long Beach, California, June 10, 11,12 1949.

The Long Beach Shell Club will be the sponsoring body, and arrangements have been made to hold the three day meeting at the Long Beach Municipal Auditorium, which is ideally located for the convenience and enjoyment of visiting members.

Enclosed with this letter will be found a list of hotels and other accomodations, information about many interesting places to visit and the program of the meeting.

Regarding the program, we feel very fortunate to be able to present to you such a fund of information. The papers are sufficiently varied to suit the needs of all conchologists and have been prepared by eminent authorities.

The annual dinner and entertainment will be a special feature sure to be enjoyed, and will be held Saturday evening 6:30 P.M. at Moose Hall, 311 Ocean Blvd., Long Beach, Calif. Total cost $1.75. Please send dinner reservations to;

Mrs. John Q. Burch,
4206 Halldale Ave.,
Los Angeles 37, Calif. Ph. Ax. 2-7965

In order to make satisfactory arrangements for the dinner, the reservations must be in not later than May 25th.

We extend sincere welcome to fellow conchologists, and hope that this annual meeting will be instrumental in strengthening our bond of friendship and mutual interests.

American Malacological Union,
Pacific Division
Miss Ruth Coates, Chairman
Dr. Leo G. Hertlein,
Secretary and Treasurer

Committee for Arrangements

H. Arden Edwards- President Long Beach Shell Club
Harry R. Turver- Program Chairman
Edward Baker- "
Mary Bormann- " & Entertainment
Mary Turver- " "
Mrs. Jean Wilkins- Dinner Arrangements
Mrs. John Q. Burch- Reservations for Annual Dinner

For additional information call or write Mrs. Ralph Bormann, 4331 Vermont St., Long Beach 14, Calif. Ph. 876-43

MINUTES 90
MAY 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Telephone Ax 3-5710
Home phone- Ax 2-7965

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PROGRAM

AMERICAN MALACOLOGICAL UNION PACIFIC DIVISION

June 10-11-12, 1949

MUNICIPAL AUDITORIUM LONG BEACH, CALIFORNIA

Friday, June 10th

1:30 P.M. Registration
Exhibit of shells by the Agassiz Nature Club of Long Beach.
Mezzanine floor, Municipal Auditorium, Long Beach.
2:30 P.M. Welcome by H. Arden Edwards, President of the Long Beach Shell Club
Short Historical Review- Conchology in Southern California by Miss Julia Ellen Rogers
3:00 P.M. Business Meeting
4:00 P.M. Marine Life (A film by courtesy of the Los Angeles County Schools)

7:00 P.M.	The Problem of the Abalone- John G. Carlisle Jr. California State Fish and Game Commission
8:00 P.M.	Phylogeny of Nemocardium- Dr. A. Myra Keen, Stanford University

Saturday June 11th

10:00 A.M.	Greetings on Behalf of the City of Long Beach Mayor Burton W. Chace
10:15 A.M.	Pearl Culture, a film of Japan's Important Industry Narration, Dr. A. Myra Keen
11:45 A.M.	Some Early Records of West Marine Mollusks Dr. Leo G. Hertlein, California Academy of Sciences
1:45 P.M.	Group Picture
2:00 P.M.	New Light on Taxonomy of West American Species of Crepidula. Dr. S. Stillman Berry, Redlands, Calif.
3:00 P.M.	Bilateral Asymmetry- Dr. Joshua L. Baily Jr.
3:30 P.M.	Additional Notes on Monterey Shells and Shell Collecting. A Preliminary Review of the West Coast Shells of the Family Fusinidae. Allyn G. Smith, California Academy of Sciences.
4:00 P.M.	Notes on West American Vermetidae- Dr. A. Myra Keen
6:30 P.M.	Annual Dinner and Entertainment Soloist- Mrs. B.E. Burchfield, Accompanist- Mrs. Horace Knowles. Magician- E.W. Ulrich

Sunday June 10th

10:00 A.M.	Ethnoconchology in the Southwest. H. Arden Edwards
11:00 A.M.	Election of Officers- 1949-1950
1:30 P.M.	Public Library- Pacific and Ocean Aves., Long Beach Marine Gastropod Fauna of Guadalupe Island, Mexico A.M. Strong
2:15 P.M.	Terrestrial Gastropod Fauna of Los Angeles County, Calif. (exclusive of the Channel Islands) Dr. Wendell O. Gregg Some Observations on Haliotidae and Their World Distribution by A. Sorensen
3:00 P.M.	Exhibit of Shells- Sponsored by the Long Beach Shell Club. Second floor Public Library, Long Beach, Calif.

Annual Dinner, $1.75 per person, send money and reservations to Mrs. John Q. Burch, 4206 Halldale Ave., Los Angeles 37, California. Reservations must be in by May 25th, 1949. Phone Ax-2-7965

****

We are all expecting a very fine meeting in Long Beach. The assistance of the Long Beach Chamber of Commerce in printing the programs and in every other way is something that should be greatly appreciated by all members.

The only regretable thing seems to be that possibly due to the fact that both our Pacific Division meeting and the meeting of the American Malacological Union in Miami are held but one week apart will very likely make it difficult for many to attend both meetings.

THE AMERICAN MALACOLOGICAL UNION

FIFTEENTH ANNUAL MEETING

THE UNIVERSITY OF MIAMI,CORAL GABLES, FLORIDA- June 16 to 19,1949

Thursday, June 16
Morning, 10 to 12: Registration, Student Club, Main Campus. Council Meeting, Upper Den, Student Club
Afternoon, 2 to 5: Formal Opening of Sessions and Presentations of Papers, Room L-2, Reserve Library,Main Campus
Evening, Annual Dinner ($2.50). Faculty Dining Room, Student Club Main Campus

Friday, June 17
Presentation of Papers, Room L-2, Reserve Library, Main Campus

Saturday, June 18
Field Day with Boat Trip

Dr. Charles Doren Tharp, Dean, the College of Liberal Arts, is in charge of the convention arrangements at the University

Sleeping accomodations will be available in the Main Campus Dormitories at $1.50 per day per person. Reservations for these accomodations should be made as early as possible with Mr. Harry Meigs, Director of the Main Campus Dormitories, The University of Miami, Coral Gables, Florida.

Meals can be had at either the cafeteria or in the soda shop in the Student Club.

Room L-2 in the Reserve Library Building is equipped for showing moving pictures and slides.

Please notify your A.M.U. Secretary before June 1 of titles of papers and time required etc.

Mrs. Harold R. Robertson, A.M.U. Secretary
136 Buffum St., Buffalo 10, New York

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MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- May,1949

The Conchological Club met May 3rd at the usual time and place Twenty-nine were present.

We were glad to welcome Dr. Shershow M.D. of Huntington Park. The minutes were approved after having been amended to read " It was moved and seconded that it be left to the discretion of the secretary how many cards need to be sent out monthly. The motion was carried."

There were no reports by the standing committees with this exception: The Field Committee Chairman reminded us that all who go on field trips are honor bound to send in a list of their findings to Mrs. Burch.

Mrs. Burch passed around several interesting clippings for our information. We were told that the large Achatina fulica Fer. is not a serious pest in its native Africa because it is kept in check by a little cannibal snail.

The Pacific Division of the American Malacological Union will

meet June 10-11-12 in Long Beach. Mr. H. Arden Edwards said more information will be forthcoming.

The speaker of the evening introduced by Mr. Grau was Mr. Jack Dowdle. We enjoyed his humerous account of the difficulties of shell hunting in New Guinea while serving Uncle Sam. Off time and the tides seldom agreed and shells collected had a way of dissapearing. The tide seemed to be about the same for about three months and then would suddenly be twelve hours later. He used a gas mask with changes for under water searching. Then suddenly all shells gathered were found to be dead probably due to pollution from the ships or oil. The poison of stonefishes and cones was discussed. He showed photographs including some of the native police who were former head hunters.

Respectfully submitted, Harriette W. Gillis

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From the Smithsonian Institution
For release Wednesday morning, March 9, 1949

Washington, D.C., March 9,1949. A cannibal snail- a pigmy which attacks and devours alive other snails 10 to 20 times its own size may prove the salvation of the garden crops of the Mariannas, America's mandated islands in the Pacific.

Specimens of this little creature, about the size of a peanut, have just been received by the Smithsonian Institution from Dr. Francis X. Williams, who was sent to Africa by the National Research Council to find natural enemies of the giant East African snail. This is one of the largest of land mollusks, about the size of a large rat with one of the most voracious appetites of any living creature.

When the Japanese took over the Pacific Islands under the mandate after the first World War they introduced these creatures from Africa as a prospective food source. About the only persons who ate them, however, were the government administrators. The natives never developed an appetite for them.

The giant snails found themselves in an ideal environment. They multiplied so rapidly that they had become a serious pest when the Navy took over the islands. Sometimes their slimy bodies covered roads so thickly that it was dangerous to drive a jeep at night. A host of them would clean up a garden in a single evening.

In their new home they had no natural enemies. In Africa, their native habitat, they never have proved a serious problem-- largely because their numbers are kept down in the balance of nature, which has become established over thousands of centuries.

One of the major factors in this balance, Dr. Williams found, is the meat-eating little snail which he collected. It is a fearsome enemy of the giant land snails, who have no natural defense against it.

There is no certainty Smithsonian biologists explain, that it will continue its cannibal habits if introduced in the Pacific. It is probable that it will first be tried out on a single small island.

Another plan for ridding the islands of their pests, now under consideration, is to sweep them up by the millions, dry them, and ship them to Japan for food.

****

Can you beat it ? No mention of the scientific name of the little snail with the result that we have all been scanning the cabinet of African land snails speculating whether this is the one or that.

Dr. Henry A. Pilsbry, The Academy of Natural Sciences of Philadelphia
Dear Burch: I notice in your April Minutes of the A.C.C.C. that I am reported as saying that I am going to make my home in Lima, Peru.

This rumor must have arisen from some complete misunderstanding When in Florida last winter I talked with several conchological friends about collecting experiences in Peru, but I do not have, and certainly never expressed, any intention of returning to that country. My permanent home address is Philadelphia.

However, I can recommend a flight to Peru for any club member who enjoys the thrill of contact with a new shell world. The Tegulas on the shore and the Epiphragmophora in the mountains look something like Californians, but about everything elese will be a delightful surprise.

Walter J. Eyerdam, Seattle, Wash. " I wish to make a few comments about colored coral. When I was collecting shells in the Coral Sea I sent home about 300 lbs. of coral. At home I have about a 30 ft. shelf space devoted to corals and sponges. Two species are red, one is pink, one yellow, one green and the rest are white. These are all bleached and not painted. White is the natural color of all but a few species of coral. There are, of course, many species of corralines, gorgonians etc. of many colors but these are not true coral. All of the artificially colored corals that I have ever seen are pure nature faking, but make very attractive specimens. These find a much more ready sale to the tourist trade and dealers have no regard as to what color the live coral polyps were. Unless a museum worker has taken accurate color notes or mixed his paints in strict accordance with the color of the living coral polyps and colored the bleached coral later after this color, the specimens are misleading to scientific study of the corals.

I wish I could attend the annual meeting of the AMU in June but as usual, I expect to be in Alaska again at that time.

During this winter I have spent more time on labelling Alaska plants especially Cryptograms than on shells although I did exchange about 1000 lots.

Robert R. Talmadge, Eureka, Calif. ....." The land Mollusca up here seem to be on the scarse side this year. With the very cold and dry winter, and now a dry spring, very few have been found out in the open. I haven't been down to Miranda to check up on the colony of the Helminthoglypta nickliniana , but did check the Jordan's Creek colony of the H. arrosa humboldtiana, found a few, mostly immatures. Will be up on Little Rock River after the So. Fork-Tailed Petrels next week and ought to pick up a few topotypes of the Monadenia f. trinidadensis. Both the birds and the snails inhabit the same rock.

Have been keeping Allyn Smith rather busy lately with the shells that the local dragboat fishermen have been bringing in to me. Of course, the large mesh of the net misses the smallr varieties but some of the larger ones are brought in. Mostly dead with hermit crabs the shell life seems to run predominately Neptunea. So far three forms of Neptunea have been brought in, N. tabulatus, N. smirnius, and one which may be the N. pribilofensis or possibly something new. A few live takes have definitely proven that these shells, especially yhe last two, into California. Evidently Dall's description of the last two were based upon juvenile specimens as most of the Humboldt specimens are over one hundred mm. in length. One N. smirnius reaching 156 mm.

Later on after more material and study has been carried out, a

paper will be written on these forms. I do not know as yet how long or how much it will cover, as the technical work is being carried on by Allyn Smith.

Incidentally these forms come from thirty seven to one hundred sixty five fathoms, which gives them quite a range in depth. The fishermen are very helpful by keeping an accurate locality, depth, and bottom for the shells brought in. Much of the region, due to a rocky bottom, cannot be dredged, and there is no local equipment for shell dredging."

Harold P. Post, Chesterfield, N.H. ...." I have only been back from Florida a short time. I had a fair collecting in some places and didn't get much in others. As I must work part time I only collected in between jobs. Everyone said the collecting was poor this year in Florida but I don't think I did so badly. I was to use Frank Lyman's boat during the months of Jan. and Feb. and collect up and down the keys but both times I went down , about full moon time, the wind blew too hard to even venture outside. Couldn't have collected any if I had gone out. To me collecting off the Fla. keys is the best place in Fla. Lake Worth is second best but this year everything is dead on account of too much rain from the hurricanes. I found good shells but with crabs in them."

Mrs. Janet Entwisle, Nutley, N.J. We have just started a shell club which meets in the N.Y. Museum of Natural History. We are having our third meeting Sunday. It is very interesting. I am to give a talk about Sanibel Island collecting and am taking along a box of shells I collected on Sanibel. Last meeting we had a talk on microscopic slides of the radulae which was very good.

Charles D. Nelson, Grand Rapids, Mich. Have just returned from a winter in Florida..... On my way down I stopped at a number of well known fossil localities and gathered a quantity of very fine specimens. First among these was Coon Creek near Selmer, Tenn. where the Ripley formation of the Cretaceous is exposed in the river bank. I also obtained many Ripley species in N.E. Missisippi and North Central Alabama.

My next " spot" was Conrad's classic locality. at old Fort Claiborne on the Alabama River where Oligocene and Eocene fossils are abundant in the river bluff.

Moving on into Northern Florida after considerable roaming around, I finally located " Shell Bluff" in the Shoal River. Here is a splendid deposit of Miocene fossils (Shoal R. formation of the Alum Bluff group) and further east in the bank of a small tributary to the Chipola River, specimens from the Chipola formation (also the Alum Bluff) were obtained. Later I also obtained some of the well known Miocene fossil corals of the Tampa Bay Miocene in which the centers have been replaced by variously colored chalcedomy as interesting and as beautiful as the so called thunder eggs of the west.

I never had collected fresh water mussels in the extreme south-east and part of my time was spent in doing just this. The streams visited were the Santa Fe of the Sewanee, the Withacoochee, the Hillsborough, and the Myaka. Many lakes of central Florida were visited and many fine shells were collected.

The tree snails of Florida had always intrigued me so I spent some time with them. I found quite a few nice varieties on the keys in the region around Homestead, and further west in the Pinecrest area and down near Marco even though it was off season for the "Ligs" and they were mostly in hibernation. I also did some marine shell collecting.

Dr. Alex Comfort, London, England " Thanks to your cooperation in getting me specimens of Haliotis I have been able to finish my work with a few shells to spare, and I will send it to you as it appears. The blue stuff in H. cracherodii is almost indistinguish--able in its ultraviolet absorption spectrum from indigotin, as other workers have thought on the strength of its visible spectrum. This is worth knowing, so very many thanks for your help.

You may remember that your Minutes printed a paper not long ago on the purple material of Murex. This, of course, is another indigo: there was a paper published here awhile ago in which it was shown that the purple in the eggs of Nucella lapillus appears only on a diet of mussels- when the creature eats Balanus the shell is colorless. You might like to suggest this problem for study in other Stenoglossa to any of your members who are at all interested in shell physiology: it would be nice to know exactly what species of Murex, Trophon, Ocenebra and Nucella lay purple eggs, whether the fry show purple staining of the protoconch, and whether diet determines the occurence or persistence of the colour in adult life. The question of shell pigments is of general interest in connection with the origin of melenins and other colours in animals- I would very much welcome contact with American biologists or molluscan biochemists who are interested in the pigments of molluscs....."

****

The above letter accompanied a separate of Dr. Comfort's work Acid-soluble Pigments of Shells I The Distribution of Porphyrin Flourescence in Molluscan Shells- From the Biochemical Journal, Vol. 44, No. 1, 11 111-117, 1949

Some Other New Publications

Hubendick, Bengt: 1949 Arkiv For Zoologi The Anatomy of Plesiophysa Ornata (Haas). 11 pages 15 figs. 2 pls.

Hubendick, Bengt Arkiv For Zool A Photographical Method of Studying Morphological Variation.

Hubendick, Bengt 1948 MalSocLondon The Anatomy of Bulinus, with a Discussion of the term Prostate and its sense in the Basommatophora.

Hubendick, Bengt 1948 Journal de Conchyliologie On Northern Isolated Occurences of Certain Terrestrial Molluscs in the Baltic Sea.

Circulares De La Sociedad Malacologica " Carlos De La Torre" Pages 113-126. It is becoming very apparent that this society is building a conchological library of which they may feel very proud.

The cover picture of Turtox News, May 1949 is a photograph of Octopus bimaculatus from Southern California taken by Mr. Woody Williams.

****

Ted Dranga, Treasures of the Sea, 238 Biscayne Blvd., Miami 32, Florida.

This is the address of Ted's new store. If there is any man alive that knows and handles the finest and most beautiful of shells and really knows them it is Ted Dranga. When visiting Miami it is safe to say that you will be missing a treat if you fail to pay Ted a visit.

The field trip of the Conchological Club of Southern California was held in the early morning for the tide. About 25 members took part and collected at Flat Rock Point below the Palos Verdes Hills. More complete reports including the species found will be published in a later issue. All who took part are requested to send a list of their species to Mrs. John Q. Burch, field trip leader.

The following report covers some of the species taken on the field trip to Dana Point, Calif. on Feb. 13,1949.
Mr. Gilbert Grau : Acteon punctocoelata Carp., Acteocina culcitella Gould, Vesica gouldiana Sowerby, Haminoea virescens Sowerby, Conus californicus Hinds, Pseudomelatoma moesta Carp.,Cytharella amatula Dall,Olivella biplicata Sowerby, Olivella baetica Carp., Hyalina californica Tomlin,Cypraeolina pyriformis Carp.,Mitra idae Melville, Macron lividus A. Adams, Mitrella gausapata Gld., M. aurantiaca Dall, M. carinata Hinds, Aesopus myrmecoon Dall, Amphissa versicolor Dall, Ocenebra poulsoni Carp., Ocenebra interfossa Carp.,Turbonilla (Pyrgiscus) tenuicula Gld.,Odostomia (Chrysallida) emgena Dall & Bartsch O. helga D. & B., O. sapia D. & B., Odostomia (Ivara) terricula Dall and Bartsch, O. (Ivara) eucosmia D. & B., O. (Evalea) serilla D. & B., Caecum californicum Dall,Micranellum crebricinctum Carp.,Fartulum orcutti Dall,Littorina planaxis Philippi, L. scutulata Gld., Lacuna unifasciata Carp.,Barleeia acuta Carp.,Hipponix antiquatus L., Crepidula onyx Sowerby, Acmaea persona Esch.,A. asmi Midd., A. paleacea Gld.,A. incessa Hinds,Phasianella pulloides Carp.,Astraea undosa Wood,Homolapoma carpenteri Pils.,Norrisia norrisii Sby., Tegula gallina Forbes, T. ligulata Menke,T. aureotincta Forbes, Vitrinella oldroydi Bartsch,V. eschnauri Bartsch, V. williamsoni Dall, Decomphala stearnsi Bartsch, Teinostoma invallatum Carp., T. supravallatum Carp., T. sapiella Dall, T. bibbiana Dall, Saxicava arctica L.*** Yet to be identified Alvania sp. 3, Barleeia sp. 15, Bittium sp. 16, Turbonilla sp. 9, Odostomia sp. 17.

Dr. A.D. Howard- Navanaz inermis Cooper,Septifer bifurcatus (Con.) Reeve,Tagelus californiensis (Con.), Protothaca staminea (Con.), Semele decisa Con.,Olivella biplicata Sby.,Acmaea asmi (Midd.), A. scutum patina (Esch.), A. scabra Gld., A. sp., Fissurella volcano, Astraea undosa Wood, Haminoea virescens (Sby.), Vesica gouldiana (Pils,), Tegula gallina Forbes,Macron lividus A. Adams,Murex festivus Hinds, Murex gemma Sowerby,Ischnochiton magdalensis Hinds, Lepidochiton dentiens Gld., Polypus bimaculatus (Verrill), Balanus spp,Decapoda sp., Echini-

The Bessoms Acanthina spirata,Acmaea asmi, A. paleacea, A. incessa, Mytilus stearnsi, Haminoea vesicula, Vesica gouldiana,Conus californicus,Olivella biplicata, Haliotis fulgens, H. cracherodii,Marginella californica,Macron lividus,Mitrella carinata,Murex trialata, Turbonilla pedroana ,Odostomia virginalis, Triphora sp.,---

The Mayhews- Vesica gouldiana,Olivella biplicata,Marginella jewettii,Cypraeolina pyriformis,Odostomia helga,Pterorhytis nuttalli, Macron lividus,Pseudomelatoma moesta,Teinostoma invallata,Lasaea subviridis,Milneria minima,Cumingia lamellosa, Asmaea asmi, A. paleacea, Phacoides annulatus desiliratus, Thracia curta,Saxicava arctica.

*** Note*** The above lists are given in the nomenclature and classification of the collectors. There are a few somewhat questionable species listed, but after all it is such friendly differences in opinion that make the study and collection of shells interesting.

From John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Return Postage Guaranteed

Sec. 562 P.L. & R.

Dr. Paul Bartsch
U. S. National Museum
Washington 25, D. C.

MINUTES 91
JUNE 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Telephone Ax 3-5710
Home telephone Ax 2-7965

****

In the spring of 1947 Professor H.W. Miller collected a series of strange unwound shells at Puntarenas, Costa Rica. He gave me about 25 specimens of them for study and since then for the past year or more they have been frequantly out on my study table with results a perfect nil other than a decision that they were probably some species of Cancellaria but certainly something entirely new in my experience. They are so completely unwound that at a hasty glance one is reminded of *Vermicularia*, but of course, a second glance dispels that idea. If but one or two specimens had been taken they might be laid aside as pathological specimens, and they may even be something of the sort anyway, but an entire colony of them is a matter of real interest. This was the situation when we were fortunate in having a visit by Dr. A. Myra Keen to whom we presented the above problem and now have some light on the matter. Dr. Keen has written as follows (personal communication June 17,1949) ;

" The strange unwound shell you gave me is, I believe, just what I at first thought- a *Trigonostoma*. I strongly suspect that it is *Trigonostoma trigonostoma* (Lamarck), the genotype. This species

is figured by Tryon in his monograph on Cancellaria (vol.7, pl.5, fig. 79), with the type locality as questionably Celebes or Molluccas. I cannot find in the literature a definite collecting record for the species, and I wonder if it is not really a West American form. The illustration in Tryon is of a specimen in which the whorls are attached but only just touching. Your specimens are definitely lax, but otherwise match the sculpture very closely. The columellar folds do not show up well on the individual I have, but I have seen figures in which they are no more apparent. You might examine the other specimens in the lot to see whether the folds are developed on some individuals. I would suggest you write a note in the Minutes and inquire whether anyone has a definite collecting record for Cancellaria (Trigonostoma) trigonostoma Lamarck. Then you would have a better basis for deciding whether this is a new species or just some aberrant specimens of a hitherto " lost" species. "

****

Any additional information on the above problem will be received with thanks.

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The Second Annual Convention of the American Malacological Union- Pacific Division held at Long Beach, Calif,, June 10-11-12.

Abstracts of the papers presented to the meeting will have been sent to Mrs. Robertson for review in the next issue of the Bulletin of the A.M.U. so the following will be merely an informal account of the meeting.

Illness prevented the attendance of Miss Ruth Coats, the chairman, and it became the duty and the privilege of John Q. Burch to act as chairman in her place.

The Long Beach Shell Club were our hosts and left nothing to be desired in this way. The Long Beach Convention Bureau had printed the programs, supplied a secretary to assist in the registration of those attending, supplied a large and confortable meeting room, and every arrangement for our convenience had been efficiently handled.

The undoubted success of this enthusiastic meeting was due to the preparatory work of members of the Long Beach Shell Club and too much credit cannot be given to Mrs. Mary Bormann and Mrs. H.R. Turver for their work in arrangement and entertainment. Mr. H. Arden Edwards, president of the club has reason to be very proud of his organization. Mr. H.R. Turver did a very fine job in arranging the program assisted by Mr. Edward Baker. Mr. Turver introduced each of the speakers throughout the meeting and did a very fine job of it. Mrs. Jean Wilkins was in charge of the dinner arrangements and Mrs. John Q. Burch handled the reservations.

Following the registration Friday afternoon the address of welcome was given by Mr. H. Arden Edwards. Mr. Andrew Sorensen then gave a very interesting talk on the world distribution of Haliotidae. In the evening John G. Carlisle Jr. of the California State Fish and Game Commission talked on " The Problem of the Abalone". This was the first discussion that many of us had ever heard of the free swimming stage of the very young Haliotis and the first account we had heard of actual spawning and hatching under observation in an aquarium. It had been thought by some that the concentration of Haliotis in certain locations might indicate that the free swimming stage was either absent or extremely brief thus preventing wide distribution by currents. However, after Mr. Carlisle's talk that theory had to be abandoned.

Dr. A. Myra Keen gave a very fine paper illustrated on the "Phylogeny of Nemocardium".

The morning of Saturday June 11th we met at 10 A.M. and were honored by a speech of greeting by Mayor Burton W. Chace of Long Beach. John Burch, as chairman, thanked the mayor for the gift of the bronze " key to the city" which after some discussion we were assured also would open the jail. Fortunately none of us had to try it.

We then enjoyed a series of three motion picture films on " Pearl Culture, a film of Japan's Important Industry". The narration was by Dr. A. Myra Keen. Few of us had any idea of the size and importance of this pearl industry and the large number of persons employed.

Dr. Leo G. Hertlein talked on " Some Early Records of West American Mollusks". We hope to hear even more about the early pioneer conchologists of our coast at a future meeting.

Dr. S. Stillman Berry gave a very interesting talk on " New Light on Taxonomy of West American Species of Crepidula". Dr. Berry had his microscope on the table and could definitely show his conclusions reached from study of the nuclear whorls, and some of them were little short of amazing. His paper will be published so it would not be fitting to make any particular comments on it.

Dr. Joshua L. Baily could not attend in person but sent a paper to be read, and Mr. E.P. Baker did a splendid job of reading it. It was a very interesting paper and one that many of us hope to see in print because a hasty reading of such a paper is very much like a brief abstract of the Einstrin Theory to most of us and we would do well to understand it thoroughly if we had it in hand with time to study it- " Bilateral Asymmetry".

Dr. A. Myra Keen gave a talk illustrated by charts on West American Vermetidae. Any of us who have ever attempted to build a collection of this family listened with great interest because it is doubtful if there is any group of West Coast mollusks in a state of greater confusion.

The annual banquet was held Saturday night with 63 persons present. We were an enthusiastic group and the dinner and entertainment were thoroughly enjoyed. Mr. E.W. (Bill) Ulrich was the height of the evening with his tricks of magic- cutting off Ralph Bormann's necktie only to have it reappear uncut and other marvels were the high lights. Many old friends met who had not seen each other for years. This is one of the nicest things about any convention.

We convened again Sunday morning at 10 A.M. in the Municipal Auditorium. Mr. H. Arden Edwards of the Southwest Museum gave a very fine talk on " Ethnoconchology in the Southwest". His talk was illustrated by literally hundreds of fine exhibits, in fact, a first class museum exhibit. His talk was followed by general discussion which usually follows a good paper.

The annual election of officers was then held and the following were elected for the coming year:

John Q. Burch- Chairman
Dr. Leo G. Hertlein- Vice-Chairman
Dr. W.O. Gregg- Secretary Treasurer

The afternoon meeting was held in the Long Beach Public Library and was the regular meeting of the Long Beach Shell Club which after a brief business meeting turned the program over to the A.M.U.

Mr. A.M. Strong talked on " Marine Fauna of Guadalupe Islands, Mexico". His talk again brought up a great deal of general discussion and some difference of opinion.

The last paper of the meeting was by Dr. Wendell O. Gregg " Terrestrial Gastropod Fauna of Los Angeles County, California ((exclusive of the Channel Isles). Dr. Gregg had a very large exhibit of specimens.

The concluding event was the entertainment of the entire group at tea by Mr. and Mrs. Fred Barnett at their home.

****

It might be mentioned here that Fred Barnett is to be congratulated on being the new Master of the large vessel of the California Fish and Game Commission. Of course, Fred's host of friends are happy but it should please all of us to have a man seriously interested in conchology in such a position.

****

A partial list of those in attendance at the Long Beach meeting follows:
Baker; Edwin Perin, 11619 Downey, Downey,Calif.
Baker; Mrs. Irene, " " " "
Berry, S. Stillman, 1145 W. Highland Ave., Redlands,Calif.
Boerstler, Elmer W. 1010 Ocean Blvd.,Corona Del Mar, Calif.
" ; Mrs. Grace " " "
Bormann, Ralph, 4331 Vermont St.,Long Beach 14, Calif.
" Mrs. Mary " " "
Bristol, Miss Viola S., 1253 12th Ave., San Diego, Calif.
Burch, John Q. , 4206 Halldale Ave., Los Angeles 37, Calif.
" Mrs. John Q. " " "
Chace, E.P. 24205 Eshelman, Lomita, Calif.
" Mrs. E.P. " "
Coles; Mrs. Mary J., 801 American Trust Bldg.,Nashville,Tenn.
Cook,W.P. 30- 66th Place, Long Beach,Calif.
" Mrs. W.P. " "
Eaton, Miss Ruth 3333 Orange St.,Riverside, Calif.
Edmonds; Mrs. E.V. 4665 Benevides Ave., Oakland, Calif.
Edwards, H. Arden, 217 South Second St., Alhambra, Calif.
" Mrs. H. Arden " "
Ferris, Mrs. Grace, 4304 Appian Way, Long Beach 3
Fletcher, Howard L., 908 Crescent Ave. B, Redlands, Calif.
" Mrs. Howard L. " "
Fox, Ralph O., 1048 Monterey Ave., Berkeley 7, Calif.
Franco, Asela B., Cebu City, Cebu, Philippines
Galbreath, Will H. 1132 Summit Ave., Pasadena 3, Calif.
" Mrs. Will H. " "
Graum Gilbert, 2457 Claremont Ave., Hollywood 27, Calif.
Gregg, Wendell O. M.D. 2200 S. Harvard Blvd., Los Angeles 7,Calif.
Hegner, Mrs. Carrie, 1904 Nolden St., Los Angeles 41, Calif.
Hertlein, Leo G., Calif. Academy of Sciences, San Francisco,Calif.
Higgins, Lena, 2224 Orange Ave., Long Beach 6, Calif.
Howard; Arthur D., 2307 W. 20th St.,Los Angeles 7, Calif.
Ingram, Wm., 120 34th St.,Newport Beach, Calif.
Keen, A. Myra, Geology Dept., Stanford University, Calif.
Laag, Mrs. Danny
Lehmann, C.A. 248 Ximeno, Long Beach 3, Calif.
" Mrs. C.A. " "
Libby, Joseph W., 817 Carson, Long Beach 7, Calif.
" Mrs. Ruth H., " "
Mayhew, Richard N., 1648 S. Genesee St.,
McGowan, Mrs. H. Carroll, 603 N. Alisos St., Santa Barbara, Calif.
Myers, Mrs.
Paxton, Mrs. Alice, 4304 Appian Way , Long Beach 3, Calif.
Rex, Miss Edith, 417 Redondo Ave.,Long Beach 14, Calif.

Saxby, John G., 846 47th Ave., San Francisco 21, Calif.
Shumate, Agnes J., 1433 6th St., Apt. F, Santa Monica, Calif.
Sorensen, A., 247 Granite St., Pacific Grove, Calif.
Sphon, Mrs. Kathryn, 5315 Ebell St., Long Beach 14, Calif.
Sphon, Gale Jr., 5315 Ebell St., Long Beach 8, Calif.
Stillwell, Grace, 337 Cedar Ave., Long Beach 12, Calif.
Strohbeen, J.P., 1135 King St., Santa Cruz, Calif.
" Mrs. J.P., " "
Strong, A.M., 320 Amade St., Balboa, Calif.
Turver, Harry R., 8640 Evergreen Ave., South Gate, Calif.
" Mrs. Mary E., " "
Ulrich, E.W., 1049 Island, Wilmington, Calif.
" Mrs. E.W. " "
Whelchel, Mrs. A.T., 303 Abbey St., Fresno 3, Calif.
McCulloch, Irene, Hancock Foundation, Univ. of Southern Calif.
Wilkins, Mrs. Jean- 5939 Gundry, Long Beach 5, Calif.
Barnett, Fred 80 62nd Pl., Long Beach, Calif.
" Mrs. Fred " " "
Carlisle, John G. Jr., Calif. State Fish and Game, Terminal Island,
Taylor, Dwight and Talyor, Dwight Willard Calif.
Lindermann, Mrs. Leona

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We have received several invitations for our 1940 convention and have at least two who offer us very attractive propositions. It is nice to know that we are wanted anyway.

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Maxwell Smith, Winter Park, Fla. " Expect to start west about the 20th. Will travel slowly, many stops. ..."

Aurele La Rocque, The Ohio State University, Columbus 10, Ohio. " ... the announcement of the 15th Annual meeting of the AMU came awhile ago. I wont be able to go this year as I am leaving for field work in Utah on the 13th of June...."

Mr. and Mrs. E.P. Chace, Lomita, Calif. " The Chaces spent the long Decoration Day weekend in the valley north of San Marcos Pass, returning with an excellent set of Helminthoglypta traski willetti Berry. Particularly interesting was the discovery that the camp keeper had been a pupil of the late Prof. Yates and recalled being lowered down the bluffs on a rope by Dr. Yates, to collect fossils."

Dr. Joshua L. Baily Jr., San Diego, Calif. " ... We are planning to drive to Denver to attend the wedding of my nephew, and will then go to Aspen to attend the Goethe Bicentenary, probably returning to San Diego late in August."

Professor Herman W. Miller, San Jose, Costa Rica " I am planning to leave Costa Rica, destination still unknown, so if I didn't tell you before, please dont mail anything more to me here...."

Jerry Bernard, 1124 Magnolia #2, South Pasadena, Calif. This is a new address for Jerry but he is at least for some weeks to come " enjoying good collecting " at Albion, Calif.

Leo Burry, Pompano Beach, Fla. " ... Have been dredging every day for a week but had a little bad luck- went 17 miles off shore and had a terrific flow of the Gulf Stream, over 7 knots and hung a Beam Trawl in 250 fathoms probably on a wreck, had to cut the cable..." ..." I will be dredging for another week and by that time I hope Bill Clench will be here..."

Tom McGinty, Boynton Beach, Fla. And Tom and his pals have been busily engaged fitting out a dredging boat to do some really deep work.

*** What's the matter with us out here in California. None of us are getting over ankle deep in water. All Florida seems dredging.

Dryver,J. Belawan, Indonesia " I am living in Belawan, a seaport with all mud; here are only a few species of Mollusca otherwise I would have sent you a collection of mollusks by way of exchange."

Mrs. George Bengston, 230 Moir St., Waterloo,Iowa . " Just returned from a 5 week visit with our daughter in the State of Washington on Puget Sound near Vaughn. We had a wonderful trip and visit... at low tide he took us to different bays where we collected nice lots of different kinds of shells. At Heron Beach near Home,Wash. we collected lovely frilled Thais,Chitons,Polinices lewisii,Nassarius mendicus.. at Jose Bay we found only Littorina scutulata and Acmaea pelta- at Henderson Bay near Glencove,Wash. we found many Clinocardium nuttallii, Protothaca staminea, and more Polinices- one of the great Schizothaerus nuttallii Conrad 9 inches long.. while digging in the sand I found Dentalium pretiosum- on the under side of a large rock I found Pododesmus macroschisma Desh. One day at a minus tide we went hunting Geoducks- the 3 men got 6 Geoducks but saved only 3 nice shells- Panope generosa Gould. One morning after a light rain we went across a patch of grass towards the spring looking for land snails and found quite a few Triodopsis townsendiana, and others under logs not as yet identified.

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SOME NEW PUBLICATIONS

THE LAND SNAILS OF WEST VIRGINIA by Gordon K. MacMillan, Annals of the Carnegie Museum, vol. 31, Feb. 28,1949. This is a very complete and well written report 155 pages 15 plates. The long lists of collecting records should make it a very valuable thing to the field collector in West Virginia.

AN ECOLOGICAL STUDY OF SNAILS OF THE GENUS BUSYCON AT BEAUFORT NORTH CAROLINA by Hulda Megalhaes, Ecological Monographs 18: 377-409. A very thorough work on this group's life history.

THREE NEW LAND SHELLS FROM PERU by Fritz Haas Fieldiana,Zoology vol.31, no.23- and LAND AND FRESHWATER MOLLUSKS FROM PERU vol.31 No.28. Good figures and careful descriptions as is the custom of Dr. Haas.

The Nautilus- Vol.62, No.4, April, 1949. The subscription has been increased from $2 to $2.50 per year. The statement is made that the subscriptions cover about three fourths of the cost of the printing alone. The editors are to be congratulated on keeping up the size and quality of the Nautilus as long as they have without an increase.

This issue contains among other fine papers three that pertain to the fauna of our coast- " Some observations on Haliotidae and their world distribution" by Andrew Sorensen; " Feeding of Ariolimax columbianus (Gould) on the California bay fruit" by William Marcus Ingram and Cadet Hand; " Some Land and freshwater mollusks from Guatemala" by Fritz Haas.

BULLETIN OF THE SOUTHERN CALIFORNIA ACADEMY OF SCIENCES- Vol. XLVIII Part I. This issue contains two papers dealing with mollusks. " Two new species of Mytilopsis from Panama and Fiji" by Leo Geo. Hertlein and G. Dallas Hanna- and A Check List of the Limacidae, Endodontidae,Arionidae,Succineidae,Pupillidae,Valloniidae,Carychiidae, and Truncatellidae of California" by Wm. Marcus Ingram.

The Journal of Conchology Vol. 23, No. 2, 31 May, 1949
There are about 20 papers in this issue but none of them seem to directly affect the fauna of this coast.

CATALOG MOLUSCOS DE CUBA by C.G. Aguayo and M.L. Jaume. This fine work continues and we have received Nos. 500-550. They are now covering the marine gastropods and many of their conclusions on nomenclature are very interesting. Those of us who are primarily interested in the fauna of this coast will still find this work giving their generic names with the type species and those of their fauna of particular value and may well cause him to regret not having at hand the West Indian species to which they refer for comparison with our related species from this coast.

LES MOLLUSQUES DE BELGIQUE by Ernest Vonck. This small book in 134 pages, and 13 plates is not new having been printed in 1933 but has not been in our library before this. The method of handling the table of genera and species is of interest and good. The figures on the plates are drawings causing one to again wonder whether a good clear drawing is not usually better than the customary dim blurred photograph which seems to be our inclination now. A good half of the photographic figures appearing in some of our finest works now could very well apply to a dozen species for all that can be seen between the shadows. In fact, a good part of our photographic figures are a perfect waste of both film and pappr.

Division of Fish and Game- Fish Bulletin No. 72 " Trawling Gear in California" by W.L. Scofield. This booklet of 60 pages and 24 illustrations has just been received. At first glance it might seem to have very little to do with conchology. However, the various types of trawling gear are described in detail with measurements and complete instructions. My personal experience while limited was to find that a properly made trawl constructed along the line and made as a model of one of the large trawls was about the most successful thing we used to get large numbers of shells. The difficulty with the average dredge used in deep water work is that it fills almost at once with the result that we pull in several thousand feet of line to find a dredge full of mud containing a handful of shells. Of course, the trawl will not dig in and it is possible to drag that loaded line for a mile or more picking up all of the larger mollusks on the surface. The obvious disad--vantage is that the trawl is easily snagged and is useless in rocky bottom- and also perhaps to the conchologist the fact that when finally hauled in the trawl will usually be jammed with echinoderms, crustaceans of all sorts, odd deep water fish, etc. so that we would often sort through an awful mess looking for our shells, but no doubt the starfish student would have been wringing his hands had he been there to see us tossing his pets overboard.

Correspondenblad Van De Nederlandse Malacologische Vereniging- No.32. These large mimeographed bulletins from the Netherlands society frequently contain some articles of considerable importance. This issue contains a paper on possible exotic species in Holland that may be immigrants from America- several rather fine discussions of nice problems concerning certain marine species etc.

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NATURAL HISTORY OF MARINE ANIMALS by G.E. and Nettie MacGinitie.
This new work should by all means be in every library devoted to any group of marine life. Professor MacGinitie's work on marine ecology has been referred to countless times. Perhaps his best known work to most of us heretofore has been his work on the Elkhorn Slough.

In this work there are descriptions of the appearance and habits of at least one representative from every major group of marine invertebrates placing emphasis on animals from the Pacific Coast of North America. The authors are the director and research assist--ant of the Kerckhoff Marine Laboratory, California Institute of Technology.

Just published and now ready for immediate delivery. May be had from John Q. Burch,1584 W. Vernon, Los Angeles 37. $6.00

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BEGINNERS GUIDE TO SEASHORE LIFE by Leon A. Hausman. The figures in this new book are drawings and very clear. The scope of the book is exactly as the title indicates. It is for those who wish to know something of the various forms of life found on the seashore of the United States and Canada: sponges, corals, jellyfishes, anemones, crustaceans, mollusks, worms, starfishes, sea urchins etc.

Now available from John Q. Burch $2.00

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The Los Angeles Times of May 16 carried two large photographs and quite an article about the discovery by S. Maus Purple of a new fossil reef at Solano Beach, Calif. It is Miocene and contains many shells.

The newspapers have also been having a regular Sunday supplement account every short time about the new Bathyscope etc. of the U.S.C. Hancock Foundation in which it is said that the deepest dive ever attempted will be made etc. etc. 6,000 ft. They tried it out in San Pedro Harbor etc. Of course, everybody is interested in this thing and no doubt we will hear plenty about it when it gets into operation.

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MINUTES 92
JULY 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

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We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

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The American Malacological Union

At the 15th annual meeting of the American Malacological Union held at the University of Miami, Coral Gables, Fla., June 16, 17 and 18, 1949, the following officers were elected: President, Dr. Fritz Haas, Chicago Museum of Natural History; Vice-president, Dr. Joseph P.E. Morrison, Smithsonian Institution; Second Vice-president, John Q. Burch, Los Angeles, Calif.; Treasurer, Harold R. Robertson, Buffalo; Secretary, Mrs. Harold R. Robertson, Buffalo Museum of Science; Councillors, Dr. Carlos G. Aguayo, University of Havana, Cuba, Dr. Joseph C. Bequaert, Museum of Comparative Zoology, Cambridge Mass., Dr. G. Dallas Hanna, California Academy of Sciences, Dr. Jeanne S. Schwengle, Greenwich, Conn.

The Pacific Division of the American Malacological Union held its second annual meeting in Long Beach, Calif., June 10, 11, 12. Officers elected were Chairman, John Q. Burch, Los Angeles; Vice-chairman, Dr. Leo G. Hertlein, California Academy of Sciences; Secretary-Treasuser, Dr. Wendell O. Gregg, Los Angeles, Calif.

The American Malacological Union has for its objective, the promotion of the science of malacology in the Americas, and membership is open to all interested in the study of mollusks. The annual

Bulletin of the Society contains a report of the annual meeting with abstracts of papers, and a list of approximately 400 members.

****

Inasmuch as Mrs. Robertson was unable to attend the A.M.U. meeting in Miami and Mrs. Margaret Teskey and I were pressed into service she has asked me to send you an informal report of the convention.

During the morning of June 16th,1949, registration for the 15th Annual Meeting of the American Malacological Union was held in the attractive lounge of the first floor of the Student's Club, Main Campus of the University of Miami,Coral Gables, Florida.

Forty-four members and guests registered , of which 1 was from Conn., 2 from Cuba, 25 from Florida, 1 from Mass., 1 Mich.,3 New York State, 4 Pa., 4 Texas, and 3 from Washington,D.C.

A very informal atmosphere prevailed throughout the entire meeting. Every one present appeared to be having a thoroughly interesting and enjoyable time. The distances were so great between the dormitories where members were housed, the cafeteria and the lecture hall that considerable time was consumed in walking to and from the various buildings. Even the walking, intense heat,mosquitoes and intermittent showers could not dampen the enthusiasm of the members.

The Annual Dinner was held in the Faculty Dining Room adjoining the cafeteria, after which Under Water films taken by the Marine Laboratory were shown in the upper lounge of the Student's Club, which is in the same building as the cafeteria. Dr. Lane described the pictures.

The council meeting took place in an adjoining room directly after the showing of the films while the other members and guests visited with old and new friends.

Friday evening June 17th the group attended a cocktail and buffet supper party in the Pan American Room of the Columbus Hotel in Miami as guests of Dr. Jeanne S. Schwengel, a charming hostess and a gay time was had by all.

Saturday morning 15 members were taken on a boat trip directed by Dr. Lane of the University of Miami, a few of whom were courageous enough to don a diving helmet and investigate the floor of the bayou where the boat anchored. Three or four of the hardiest members suffered from mal de mer and not all of these were of the weaker sex. A University bus was supplied to take the party to and from the boat dock.

As the boat would accomodate only 15 passengers a bus trip to Key Largo was arranged for twenty members and guests. Two University students were sent along to prevent collecting in unsafe areas. The bus was parked near and inlet where both land and marine specimens were collected. Quantities of sun-tan lotions, liquid insecticides and sunburn creams were used. Basket lunches were provided by the University Cafeteria for both trips.

The weary collectors returned to the dormitories in the late afternoon, some left shortly afterwards to return to their homes, others went on to other vacation spots in Florida and a few remained one or two days to recuperate.

It was indeed nice to have Dr. C.G. Aguayo and Dr. Isabel Perez Farfante from Cuba among those present at the meeting.

Margaret M. Teare

A.M.U. papers presented during the afternoom of June 16th and the morning and afternoon of June 17th,1949

Dr. C.G. Aguayo- Malacology and Nomenclature. Dr. Aguayo will exhibit a collection of minute mollusks found in West Indies.

Dr. Paul Bartsch	Synopsis of the Cuban Macroceramus and Microceramus
Dr. Wm. J. Clench	Some Kodachromes of live Achatina fulica
Dr. Elmer G. Berry	Molluscidal Experiments in Brownsville Texas
Dr. Gordon K. MacMillan	The Occurance of Hendersonia occulta in Pennsylvania.
Dr. Isabel Perez Farfante	Exhibition of Marine Mollusks from the Argentine
Yoshio Kondo (Read by Dr. Horace Baker)	Biographical Sketch of Dr. Montague Cooke Jr.
Dr. Henry Van der Schalie	Another Tecnique for the Preparation of Radulae
Dr. Luis Howell Rivero (Read by Dr. Wm. J. Clench)	The Reproduction in the Cuban Land Snail Caracolus sagemon
Dr. Jos. E.P. Morrison (Read by Mr. McGinty)	Notes on the Florida Species of Bursa

At the conclusion of the above papers, Dr. Elmer G. Berry gave a brief and informal discussion of recent investigations of Medical Malacology.

****

We owe our fellow member E.P. Chace a sincere apology. In some careless manner we left his paper out of the list of papers read at the A.M.U. Pacific Division meeting at Long Beach.

The first paper on the program Saturday morning June 11th was " Some Notes on the Genus Monadenia of the Coastal Sections" by E.P. Chace.

It is safe to say that no living person has collected as many specimens of this genus as the Chaces, and we look to them for our authority on these denisons of the Redwoods.

****

The Natural History Museum in San Diego, Calif., Balboa Park is again open to the public. The opening day was July 3. The building was taken over by the U.S. Navy during the war and has just now been returned and at least most of the exhibits reassembled. We are happy to report this because this is one of our very finest coast museums containing a great many type specimens and other priceless material.

****

Harold Harry " ..am at Univ. Mich. Biol. Station until 15 August. It is very wonderful. One of the classical spots for studying limnology... Margaret Teskey of Buffalo is vacationing near here, and promised to be over tomorrow for a bit of collecting. She was at the Pacific Grove meeting, also the one at Pittsburgh and Miami.
Am busy with Carychium as a research problem, and finding some interesting things about habitats. Also have Zoogenetes harpa, Planogyra.... H.B. Baker and Allen Archer both published on material of this region...."

COLLECTING ON JAMAICA

By Heathcote M. Woolsey

When four years ago my wife and I first went to Jamaica it was not to collect shells. In fact Mr. and Mrs. North MacLean, shillful collectors, had told me the shells on the beaches were spread very thin. However, they did say that they had enjoyed driving from one beach to another and had found a considerable variety by visiting a wide area. The island is about 200 miles long by from 40 to 60 miles in width. Most of the beaches are privately owned and in many cases not directly accessable from the road. Moreover out first year gas was rationed so that collecting had to be pretty close to where you happpened to be staying.

I first called on Mr. Bernard Lewis, Curator of the Natural History section of the Institute of Jamaica. Although not a specialist in malacology he knows a lot about the likely places and his advice was valuable. He told me that at the extreme westerly end of the island, at Negril Beach, I would probably find the best collecting. As this was 130 miles from Ocho Rios where I was staying and thirty miles from the nearest hotel it did not seem probable that I would get there, so I started to explore the possibilities of the shore within reach of Ocho Rios. I found that there were many *Acmaeas*, *Fissurella*, *Littorina*, *Nerita*, *Neritina*, *Livina pica* and *Chitons* to be found on the rocks but next to nothing came to the beaches even after a hard blow. The reason for this was not hard to discover. The coral reefs which almost completely surrounded the island were a quarter to a mile from shore and seldom came to above the low water level. What material lay between the reef and shore was well hidden by the many coral heads. I did notice a vast quantity of *Strombus gigas* more beautifully colored than anywhere else I had seen them but all with a hole knocked in them. Along the shores there were frequent piles of this shell collected for food by the natives. Some piles were ten feet high. I knew these must have been gathered by boys diving for them, so I went out with a water glass and a boy trained to slip over the side and go down to perhaps 3 fms. The trips floating over the sand and coral, disclosed a colorful bottom but few shells. I did get some *Cassis flammea*, *Cassis tuberosa* and a few *C. madagascarensis Lam.* all beautiful. But the principal advantage of this enterprise was to inform the fishermen that there was a customer for shells which they had saved, by products of years fishing expeditions, and then decorating their cabins. Wherever I went in a car I was stopped by a signal and found it worth while to look at what these men or more often boys had to offer. I can remember vividly when a man I had not seen before offered me a gourd full of shells, all interesting but including a *Conus* I had never seen before and a *Cassis* type I did not recognize. As a matter of fact when I showed these shells later that winter to Maxwell Smith he did not recognize them either. I now know the *Conus* was *Conus centuris* well pictured by Reeve, but an exceedingly rare shell and the other was *Sconsia striata*- hitherto only recorded as dredged at over 200 fms. depth. Naturally I wanted to know where these shells were coming from. At first each fisherman was very secretive, like proppectors in the early days in California. It was only gradually that I disoovered that although the prevailing price for fish is a shilling a pound there are two species which bring a shilling and threepence, (25¢). These are known to the fishermen as " silk fish" and " Satin fish". The extra 5¢ a pound has persuad-

-ed some fishermen to set their traps in from 70 to 80 fathoms of water. Fortunately on our side of the island this depth can be reached within a mile outside the reef. When I have asked the depth I am always told 100 fms. This is because they have to buy 600 feet of heavy line, a very considerable investment. The traps are usually baited with sea urchin meat, well rotted as a farmer would say. The traps used to be beautifully made from withes interwoven to form octagonal interstices of about 1½" across. Now most of these have been discarded for galvanized iron 1" mesh. The state fish commission permit no mesh smaller than 1" to insure the trapping of adult fish. Now after four seasons in Jamaica I have interested the fishermen who set traps in deep water to save the Mollusca. To keep them interested I have to take more duplicates than I want. It is better to pay a small price per shell but take most of what has been brought in. Of course, to the fishermen all shells look alike, but I have stimulated their interest by making drawings of shells for which I promise to pay a bonus, five, ten shillings, or even for another *Conus centurio* a pound. Unfortunately no other s specimen of this shell has turned up. I have now aquired from the fishpots the following rare species, all properly identified by Mr. Clench at Harvard or the Smithsonian, Dr. Rehder or Dr. Abbott.

Lyria beani Fischer and Bernardi
Conus centurio Born
Sconsia striata Lamarck
Turris alba Wood
Murex antillarum Hinds
Murex ciboney Clench and Farfante
Murex pulcer A. Adams
Turbo canaliculatus Hermann = T. spenglerianus Gmelin
Ranella ponderosa Reeve
" unnamed but undoubtedly the same species as one in the Smithsonian collection.
Fusinus encosmius Dall

Turris alba and *Murex antillarum* are so far as I know the only ones of the list which have been reported before as coming from Jamaica. The records on *Lyria beani* are very meagre. It was reported in the Journal de Conchyliologie Vol.5 as coming from Islet of Marie-Galante, near Guadaloup, two specimens then known. The Smithsonian has the tip of one. I should be interested to know of further records.

So far I have been limited to fishpots made with 1" mesh. This, of course, limits the take to the larger shells, though many of the *Murex* crawl over the outside and cling to the mesh even after the pot has been lifted over the gunnel of the dugout canoes. I now with the help of Mr. Lewis have permission to use ¼" and ½" mesh, for scientific purposes. We are making some pots for the smaller Mollusca to be anchored in various depths up to over 100 fms. The lines must have floats tied at say each 100 foot interval to keep it fairly taut. Amusingly enough the float nearest the surface is not as with our Maine lobster pots floating on the surface, but some feet below to hide location from competitors. The form of the fishpots now generally used in Jamaica is roughly two polygons with a narrower connection. The opening is made with a baffle straight on the inside, sloping on the outside. This permits the mollusk to crawl up the incline then drop down into the interior. Of course, only certain mollusks are carniverous. All herbaceous feeders are eliminated by this type of capture. I do not attempt to

compare this method of acquiring shells with wandering over a large exposed area of bottom at the extremely low tides. In Jamaica the rise and fall is never more than 18 inches. I have had good results from turning over rocks in shallow water. Perhaps the pleasantest find by this method of collecting was when I discovered a colony of *Murex brevifrons* seeking the protection of rocks until ready to face the perils of the open spaces. The delicacy of the fronds of these youngsters has to be seen to be believed. I have only once done any dredging and that was in Kingston Harbor. Mr. Bernard Lewis had organized the expedition and when King Leopold of Belgium who was staying in Jamaica heard of what was proposed, he admitted he would very much like to join us. I had met him through our common interest in conchology and I knew he was keen because he had described vividly his collecting experiences off the Celebes and New Guinea coasts, but I was much impressed when he was ready to get up at 2 A.M. to motor all the way from Black River where he was collecting, to join us, at Kingston, then after a long day returning the four hour drive after five in the afternoon. When the dredge came over the side through his efforts and those of the sturdiest members of the crew, it was King Leopold who handled the spiny sea urchins which he took in large numbers. When the sea urchins had been disposed of it was also the King who poured over the shiny examples of marine zoology. Actually the Mollusca on this expedition were dissapointing though we did get some beautiful examples of *M. woodringi*. Dredging would be more interesting below the depth of coral further off shore. However, in Jamaica as elsewhere it is so expensive only those who can pay for deep sea fishing outfits can afford it. I have now found a really good pair of goggles, much better than any glass bottomed box. These add to the possibilities of collecting, but you have to be a better swimmer than I am to get down to interesting depths. I am still looking for the kind of gentle beach just awash where the miniatures come in as they do at Sarasota Beach, Florida or parts of Sanibel Beach. I have now been to Negril beach at the extreme west of the island and even Bloody Bay where very few of the natives are apt to have ventured. They are the best beaches. I have found a dozen *Xenophora* there and the fishermen bring in *Strombus gallus*. The spot is malarial and hard to reach, however a six mile tropical beach, well strewn with shells and no takers is worth a visit. Some years hence I shall hope to report results from the small mesh traps.

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Some of Mr. Woolsey's correspondence since writing the above is of interest in this connection. " Probably the *Murex* which I sent on to you labelled *M. ciboney* should have been labelled *Murex cailleti-kugleri* Clench and Farfante . I have had a letter from the Smithsonian giving that identification. *Turbo canaliculatus* Herman, I sent to them and they say " It is the first specimen" in their collection. I sent one or two to you.

Those interested in this material may note the last page.

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Leo Burry- Pompano Beach, Florida " ...Have been racing around getting my torn up dredging equipment overhauled. Had a rather bad time in the axis of the Gulf Stream. Found miles of uncharted reef or rocks in 400 fathoms and lost all of my dredges and 3000 feet of cable. I am getting ready to try it again between Key West and Cuba. I expect Bill Clench to be along."

Prof. A.S. Duckworth, Cape Girardeau, Mo. " Dear John: Am coming 87 and should retire etc." If I know the professor that will never be.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Mr. Kanakoff being away and Vice-president Mayhew ill, Mrs. Rose Burch was nominated and elected as President Pro-Tem and Mrs. E.P. Chace as Sec. Pro Tem. 22 members and 9 guests were present. Attention was called to the shell article in the Natl. Geographic Minutes of the previous meeting had been mislaid so were omitted. There were no committee reports. Greetings from President Kanakoff were relayed to the club. Mr. H. Turver spoke on his collecting at Cholo Bay near Guaymas. He took probably 300 species. A few casual observations were: that specimens from Guaymas are larger than the same species from Panama, and those from Cholo Bay usually larger than those from Guaymas. Fusinus ambustus was spawning in dead clam shells. Nanetia pallida was also spawning and Mr. Turver observed two in close contact with a third partly buries with eggs on the back. Calliostoma was rare and not found on the rocks. As the tide returned Calyptraea was seen raising. Large Encope grandis and Dosinia ponderosa were taken. Crepidula incurva was taken on Cypraea shells only. The trivia solandri were very large. Olivella versicolor was observed to swim rapidly straight upward. Many shells live under the edge of coquina terraces.

Respectfully submittes,
Elsi M. Chace.

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MINUTES OF THE LONG BEACH SHELL CLUB

The Long Beach Shell Club annual watermelon party was held in the lovely back yard of Mr. and Mrs. E.P. Baker of Downey. Guests were Agnes Mele of Inglewood, Jack Brookshire of Los Angeles, Clarence and Pat Krapach and two children from Downey, Dolly Obradovich, Laura Oliver and Minnie Dee Harris from Long Beach, Mrs. Minnie Myers from Hawthorne and Rose Parks from Santa Monica.

Mr. Edwards was speaker of the day. His topic was " How to Mount and Preserve Shells and Marine Life". I am sure everyone present will profit from Mr. Edwards excellent talk.

The recent convention of the American Malacological Union Pacific Division was discussed and dues for the Long Beach Shell Club was sent to Mrs. Robertson, Secretary of the National organization. Members were urged to join.

The shell collection of the late Esther Johnson, one of the founders of the Long Beach Shell Club, was donated to the group by members of her family. The club under the direction of H. Arden Edwards , president is planning on making a study or loan exhibit of the collection for the students of the Long Beach Schools or various nature groups who might be interested in classifying or identifying their shells. At present the schools do not have such an exhibit and it is greatly needed.

Mrs. Esther Johnson was a teacher in Lowell Elementary School for 20 years. When the study of shells was a project of the schools each pupil in her class room had mounted collections of over 100 shells found in or around Long Beach. Each shell was properly labelled and identified. Many teachers in the Long Beach school system have started their pupils on this interesting and fascinating hobby. Space does not permit us to mention them all but at this time we would like to acknowledge the splendid work of Mrs. Esther Johnson, Lowell Elementary School, Mrs. Louise Sherros, Fremont School. Both teachers have passed on but the results of their work is reflected in some of the members of the Long Beach Shell Club.

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Dr. Howard R. Hill and Mrs. Hill have been on an extended trip east. We hear from them from many places- last being Niagra Falls.

Mr. Robert M. Moses, London England. Mr. Moses died suddenly June 13th from a heart attack. Mr. Moses was always an enthusiastic worker and exchanged with many who thought of him as a personal friend even though they had never met him in person.
Mrs. F.K. Hadley, Mass. Mrs. Hadley sells fine specimen sea shells and has an extensive world wide stock. " I am enclosing my check for $2.50 to pay for another year's subscription to the " Minutes".. I do so enjoy reading them and they contain information about people I either know or have known or have had business dealings with. Some names that I see mentioned frequently I feel as tho I almost know them, and perhaps I will sometime. Dr. Hill of Los Angeles and his wife are visiting us this afternoon and we have been antici--pating their visit with a great deal of pleasure. I am picking them up at their hotel in Cambridge, Massachusetts and bringing them to our home. Had a fine vacation in Washington, D.C. in June and took in the Department of Mollusks at the Smithsonian where we had a delightful time. Met Dr. Rehder and Tucker Abbott. Dr. Bartsch also happened to be there at that particular time....."
Lt. Col. A.A. Anderson who has been stationed on Okinawa for the past several years dropped in for a visit last week and showed us some of his shells. He had some good ones- Pleurotomaria,Thatcheria, some very unusual Oliva and one very beautiful Conus that caused us to dig out Reeve's monograph etc. in order to even attempt to put a name on it. That four inch bright red Conus was really an item. Colonel Anderson is to be stationed in Virginia. We hope to hear more of him.
Ralph O. Fox , Berkeley- " I followed the suggestion of several at the convention and went to the Cabrillo Museum in San Pedro and had a very enjoyable time. Went by Allyn Smith's and left his paper I read- but he was up at Echo Lake (bnear Tahoe) preparing the cabin for the summer, so haven't had a chance to talk to him with reference to the " proceedings". Received a nice lot of limpets etc. from Mrs. Turver, all from Guaymas or thereabouts...."
Robert R. Talmadge, Eureka,Calif. " ... Maybe we are not dredging up this way, but at least we are taking advantage of the specimens that the Otter trawlers bring in. The Bluefin came in the other day with a few more shells. These were all taken in Plot 116 S.W. of Crescent City in 118 fms. mud bottom. It was rather surprising to find all three of the local *Neptunea* in one spot, and two living forms from the same drag. I have the *Neptunea tabulatus* Baird from this depth and shallower, but this is the first of the *N. smirnius* Dall taken in this shallow water. All of my others came from at least 165 fathoms. Incidentally one was a monster-- 158 mm in length. Then an immature *N. pribiloffensis* Dall filled the quota. Also in the drag was some form of a *Calliostoma* which I am still working on. It was dead, but represents the first one noted here off this coast. It is over 30mm long, and not worn badly.

One of the local papers in the fishing news gave out some rather interesting information that probably explains these northern shells off this area. It was referring to the tuna along this and the Oregon coast, and stated that the reason the tuna were so far out to sea off Humboldt was that the deep undersea canyons of the Eel,Matole, and Klamath extended into the extremely cold water,this bringing this cold water into shore. The tuna remained in the warmer waters, but by the locks of things the northern mollusks moved right in. As yet I have not checked on the semi fossils from the off shore rocks but will send you a list of them just as soon as I can determine or have determined the forms they represent."

Some Publications Recently Received

Proceedings of the Malacological Society of London. The longest paper is on the English Eocene and Ologocene- one paper is of rather unusual interest " Movements in Venerupis (Paphia) pullastra I may be mistaken but it seems to me that the movements of our Protothaca staminea differs somewhat. A comparison might be of interest. Dr. Quayle's use of the generic name Venerupis for this species is no doubt correct and of interest because V. pullastra is the genotype of Venerupis. We have largely rejected Grant and Gale 1931 in which they placed all of our West Coast species under Venerupis. It is interesting to consider that perhaps Grant and Gale may be right after all. While thinking about this just now I laid out a specimen of pullastra and one of our staminea and if there is the slightest difference in the hinge structure I would appreciate having it called to my attention.

" Shells Used as Horns" by R. Winckworth is an interesting short paper. I have seen the actual horns used by natives made from both Charonia and Cassis, but have never seen one from Lambis as pictured in this paper. Mr. Winckworth mentions that they can be heard over a mile away. I have one in my show window. If trade gets too dull might try blowing it, but would more likely bring the police.

Those interested in the fresh water Pomacea of South America will find a discussion of three types by T. Pain of interest.

Any unusual habitat should be of interest contemplating the possibility of similar things here or elsewhere. A new species of Musculus is described by Kathleen M. White from the Indian Ocean and taken from the test of an Ascidian.

And the note on the Hooked Squid,Onychoteuthis is of interest because it swims with such great velocity that it frequently leaves the water and is found on the decks of vessels- called the " flying squid.".

THE MALAYAN SPECIES of Diplommatina (Cyclophoridae) by F.F. Laidlaw Bulletin fr Raffles Museum,Singapore,Jan.,1949 17pp 3Pls.

Basteria- Vol. 13, no.1-3 1949 . In this issue the longest paper and in English should be of interest because it is " The Mollusc Fauna of Glasshouses in the Netherlands". It is of interest because a number of the same species will be found under the same conditions in this country.

Bulletins of the State of Wash., Dept. of Fisheries, Willapa Pacific Bulletin. We have quite a file of these largely devoted to the setting etc.of the oysters in different sections of Washington. One brief note recalls Mr. Talmadge's comments in a note above- " Although the native oyster spawns at a much lower temperature than the Pacifics...the prevailing low temperatures have been unfavorable to their development..."

Fisheries Newsletter, Australia, June 1949. There are usually a few interesting items in this paper. This issue contains the 8th and last of a series by J.M. Thomson " Life Story of An Oyster"; another paper " Scallop Depletion Not Feared" by J.T. Challenger of Tasmania, figures the Tasmanian Pecten comparing them at age 1 year, 2 years and fully adult. Considering the fact that these Pectens are in considerable demand by collectors it is interesting to note that they are being dredged extensively as a commercial food source.

RARE SHELLS FROM JAMAICA

Referring to Mr. Woolsey's paper on pages 4-6 this issue some of them are available from John Q. Burch.

Murex cailleti kugleri Clench and Perez Farfante	$7.50
Murex antillarum (Hinds)	$7.50

A few others may be available by application.

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A few recently published books follow- all 1949 publications.

NATURAL HISTORY OF MARINE ANIMALS by G.E. and Nettie MacGinitie. This book is enjoying a very large and well deserved sale.	$6.00
THE OCEAN by Francis Downes Ommanney - a very interesting book devoted to the physical characteristics of the ocean basin, Sea water etc.	$2.00
SEA SHORE LIFE OF BRITAIN by L.R. Brightwell	$3.75
SEASHORE TREASURES by Charles Howard Edmondson. Descriptions of habits, habitats and appearance of fishes, snails, crabs, sea stars, and other marine life found on the Hawaiian seashore.	$3.50
BEGINNERS GUIDE TO SEASHORE LIFE by Leon A. Hausman	$2.00
PROCEEDURE IN TAXONOMY by Schenck and McMasters- revised by Keen and Muller	$2.50

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A. Sorensen, Pacific Grove, Calif. At our recent A.M.U. meeting in Long Beach there was some difference of opinion re Mr. Sorensen's observation on the free swimming larvae of Haliotis. A personal communication from Prof. Ostergaard to Mr. Sorensen is of interest inasmuch as it agrees with Mr. Sorensen's contention. " Since I came back to Hawaii about 3 months ago ....Since my return I completed a nunuscript on spawning and early stages of Hawaiian marine gastropods to be published in Pacific Science by the Univ. of Hawaii. When it comes out- not, however, for several months I shall mail you a reprint. Your very interesting article on the Haliotidae in the April number of Nautilus touches upon problems of distribution that I also have discussed in my publication on spawning etc. I found that out of 41 species of marine gastropods from Hawaii carried to their free-swimming veliger stage only one of that number had no free-swimming existence. This was Conus omaria Hwass- as far as I have been able to identify it- and it occurs under many varietal or ecological forms in the Islands- a circumstance that might be related to its none-swimming larval stage. I believe you are right in assuming that the restricted distribution of Haliotis is caused by a none-swimming larval stage. This has been said to be the cause of a similarly restricted distribution of the Volutidae."

****

August 2 Meeting

We are expecting a large turn out for our next meeting to hear Mr. A.M. Strong's talk on West Coast Conus.

The Los Angeles Museum, Tuesday, August 2 at 7:30 P.M.

From John Q. Burch,
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Dr. Harald A. Rehder
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MINUTES 93
AUGUST 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

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We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

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MISTAKES ARE FUN SOMETIMES

We enjoyed another hearty laugh at the expense of one hoping to establish a reputation as a conchologist by revamping the work of others and republishing.

Of course, it would take some time to check the references even if one had a slight acquaintance with the actual species discussed, but perhaps it is only fair to warn that the work of this editor not infrequently contains typographical errors of spelling. Therefore when our work is copied including the errors, the source of the information used becomes so obvious that it is amusing especially when no mention is made of our paper in any way other than perhaps a vague reference to mimeographed sheets.

Such things are as usual printed in some obscure publication seldom if ever seen by serious workers in conchology.

The Minutes of the Conchological Club of Southern California go to most of the serious students of malacology both in this country and abroad, a nd are accepted and quoted by reputable workers everywhere.

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The Terrestrial Gastropod Fauna of Los Angeles County,California
(exclusive of Santa Catalina and San Clemente Islands)

By Wendell O. Gregg

(Read at the 2nd annual meeting of the American Malacological Union, Pacific Division, Long Beach, Calif.,June 12,1949).

Although Los Angeles and vicinity has long been the home of many conchologists, interest has generally been in marine Mollusca rather than in the nonmarine groups. The aquatic species are unattractive and many of the land forms are small and inconspicuous. Most of our land snails are hard to find. During the time generally required to collect a few land snails of a single species, one can readily go to the sea-shore and collect a score or more species, some in vast numbers, and many of them of the larger conspicuous forms. Notwithstanding, considerable work has been done on our local land snail fauna.

In 1911, Edson and Hannibal published " A Census of the Land and Freshwater Mollusks of Southwestern California, Part I, Land Mollusca", in which they dealt with the area lying " south of the great divide formed by the crest of the Santa Ynez,San Gabriel, and San Bernardino Mountains and westerly from the San Jacinto, Cuyamaca, and San Pedro Martir Ranges". In this paper the authors list 55 species and subspecies, 29 of which are to be found within the limits of Los Angeles County.

From Los Angeles County or immediately adjacent territory has come type material for the following eleven species and subspecies:

Helminthoglypta traski (Newcomb),1861
Punctum conspectum pasadenae Pilsbry,1896
Helminthoglypta petricola zechae (Pilsbry),1916
Helminthoglypta petricola sangabrielis (Berry),1920
Pristiloma gabrielinum (Berry),1924
Helminthoglypta fontiphila Gregg,1931
Helminthoglypta traski pacoimensis Gregg,1931
Helminthoglypta tudiculata imperforata Pilsbry,1939
Glyptostoma gabrielense Pilsbry,1939
Deroceras monentolophus Pilsbry,1944
Sonorelix (Herpeteros) angelus Gregg,1949

Some data on our land snails was made available in the various editions of Keep's " West Coast Shells". The publication of Dr. Pilsbry's monograph," Land Mollusca of North America (North of Mexico)" (1939 to 1948), brought together all published, as well as, much previously unpublished data on the land snails and slugs of this county. In Dr. Pilsbry's work, locality records are listed for 27 species and subspecies of land snails and slugs occurring in Los Angeles County.

The political limits of Los Angeles County include six main topographical divisions: (1) Antelope Valley, the extreme western arm of the Mojave Desert; (2) Liebre Mountains ; (3) San Gabriel Mountains; (4) San Fernando Valley; (5) Santa Monica Mountains; and (6) Los Angeles-San Gabriel Valley. Santa Catalina and San Clemente islands are included in Los Angeles County but since the land gastropods of these islands, together with those of the other Channel Islands, comprise a distinct faunal unit, not too closely related to that of the mainland, they are not dealt with in this paper.

From the area under consideration, 44 species and subspecies of land gastropods are known. Of these 33 are endemic and 11 are

introduced. We have 35 species and subspecies of land snails, 29 endemic and 6 introduced. There are 9 species of slugs, 4 endemic and 5 introduced.

Of the endemic forms, 9 families and 20 genera are represented.

Helminthoglyptidae	Helminthoglypta (7) Micrarionta (1) Sonorelix (1)
Camaenidae	Glyptostoma (1)
Haplotrematidae	Haplotrema (1)
Zonitidae	Euconulus (1) Pristiloma (2) Hawaiia (2) Zonitoides (1) Striatura (1)
Limacidae	Deroceras (2)
Endodontidae	Discus (1) Punctum (3)
Arionidae	Anadenulus (1) Hesperarion (1)
Succinidae	Oxyloma (1) Succinea (1) Quickella (1)
Pupillidae	Vertigo (3) Sterkia (1)

Los Angeles County represents the northern outposts of the genera Sterkia and Glyptostoma, and Herpeteros, a subgenus of Sonorelix. Los Angeles and Orange counties form the southern limit of the range of the slug genus Hesperarion. Glyptostoma and the slug genus Anadenulus are confined to the Southern California Area as defined by Hannibal. Helminthoglypta is quite generally distributed throughout the state except that but one species is to be found east of the crest of the Sierra Nevadas. It overlaps into southern Oregon and into northern Lower California but it is not found in Nevada or Arizona. Besides Helminthoglypta, the following genera are known to extend into Lower California : Micrarionta, Sonorelix, Glyptostoma, and Haplotrema. The following genera are holarctic: Euconulus, Zonitoides, Deroceras, Discus, Punctum, Oxyloma, Succinea, Quickella, and Vertigo. Punctum and Oxyloma are reported from South Africa. Haplotrema, Hawaiia, and Striatura are generally distributed over North America. Striatura also occurs in the Hawaiian Islands where Dr. Pilsbry suggests it might have been carried by migratory birds. Pristiloma is quite generally distributed over the Pacific costal region from Alaska to California, and inland to Montana and Utah, with a single species occuring in Japan. Deroceras and Sterkia extend into South America. Haplotrema, Hawaiia, Zonitoides, Striatura, Punctum, Succinea, and Vertigo extend well into the Middle American Region.

It will be seen from this evidence that the most widely distributed genera of land gastropods are those which are most readily dispersed by such agencies as wind and migratory birds. Land gastro-

-pods are readily dispersed with flood-born debris but such dispersal is limited to drainage systems. Our genera of larger land snails, with the exception of Haplotrema, are of limited distribution.

In the area under consideration, we are dealing with life zones ranging from Lower Sonoran to Boreal, or Canadian. Edson and Hannibal list the land snails to be found in the Canadian,Transitional, and Upper Sonoran zones with statements that no land snails are to be found in the Lower Sonoran zone and that all of our large helices are restricted within the limits of the Upper Sonoran Zone. I am not at this time prepared to give a detailed discussion of the distribution of our land snails in the different life-zones, but for the present it may suffice to add that I have taken Helminthoglypta throughout the Transitional zone.

My collecting began in the early 20's, when activities were limited to city parks. Helix aspersa Mull., three species of Oxychilus, Hawaiia minuscula (Binney), Punctum conspectum (Bland), Vallonia pulchella (Mull.), and four species of slugs were found. Then came trips with the Chaces to canyons on the south side of the San Gabriel Mountains where we found Helminthoglypta tudiculata angelena Berry, Helminthoglypta traski (Newc.),Helminthoglypta petricola sangabrielis (Berry) and related forms, Glyptostoma gabrielense Pils., Haplotrema caelatum (Mazyck), Striatura pugetensis (Dall), and Zonitoides arboreus (Say).

Some years ago, along the Los Angeles River between Griffith Park and Glendale, were to be found small island like areas, high enough above the river bed to escape destruction of their molluscan population by high water at time of floods. To the native fauna was added introduced species carried down stream by flood born debris. I was introduced to this area by Edwin Elsner, a butterfly collector. Later I visited this area many times, frequently accompanied by Morris Caruthers. Here we found Helix aspersa Mull., Helminthoglypta traski (Newc.), Haplotrema caelatum (Mazyck), Oxychilus draparnaudi (Beck),Hawaiia minuscula (Binney),Zonitoides arboreus (Say), Striatura pugetensis (Dall), Punctum conspectum pasadenae Pils.,Succinea avara Say, and Vertigo californica trinotata (Sterki), while a few feet away, at the margin of the stream in a strictly aquatic habitat was Quickella rehderi Pils. associated with freshwater snails. These areas, offering an obstruction in time of high water in the Los Angeles River, were considered a flood hazard, hence this collecting area has been wiped out by flood control activities.

Renewed collecting in the early 30's brought to light two new snails, Helminthoglypta fontiphila and H. traski pacoimensis. Though relationship of fontiphila to the desert forms of that genus was mentioned when it was first reported, its true nature as a desert dweller was not realized when, ironically enough , it was named fontiphila, lover of the spring or fountain. Subsequent collecting has shown it to be also distributed over arid hillsides where it has shelter beneath the mats formed by dead yuccas.

A decade later the writer became interested in land slugs. Efforts with this group led to the rediscovery of Anadenulus cockerelli (Hemphill). Though sought for by many naturalists, it had not been taken since Henry Hemphill took the type lot, over fifty years before. Originally described from San Diego County, the five localities in which it was taken by the writer extended its range through Orange, Los Angeles, and Kern counties. Hesperarion hemphilli (Binney), previously known only from the region

of San Francisco Bay, was taken at eight localities in Los Angeles and Orange counties. Type material from which Dr. Pilsbry described *Deroceras monentolophus* came from Carbon Canyon near the Los Angeles-Orange County boundary and several other collecting localities in Los Angeles County and elsewhere.

Specimens of *Helminthoglypta* have been taken from as high as 6,000 feet altitude in the San Gabriel Mountains. The material found has been scarce and until more material can be obtained and the anatomies carefully studied, these forms cannot be definitely placed specifically. It would appear that most of them belong to a very variable member of the *petricola* group.

Snails found in the North Fork of the San Gabriel Canyon bore shells which were indistinguishable from *Helminthoglypta lowei* (Bartsch) from Palomar Mountain. Dissection of the animals showed them to be closely related to *H. petricola*, a very different subgenus. A number of other forms of *Helminthoglypta* have come to my attention which are very distinct from any of the described species and subspecies, but these too must wait until careful anatomical study of the animals can be carried out before their relationships can be understood.

In my study of the land snail fauna of this county, by far the most interesting find was *Sonorelix (Herpeteros) angelus* from Soledad and Mint Canyons. This is the only record of *Sonorelix* from Los Angeles County, and the only record of the subgenus *Herpeteros* from California. Members of the typical subgenus are confined to the desert regions of Inyo, San Bernardino, Riverside, San Diego, and Imperial counties and are known to extend a short distance into Lower California, Mexico. Other members of the subgenus *Herpeteros* are known only from the Pacific Coast side of Lower California.

It is hoped, in the near future, to make available a complete list of distributional data and collecting localities. At this time a list of species and subspecies of land gastropods found in this county is given without further distributional data. Introduced forms are so indicated. From the following list has been omitted *Otalia lactea* (Muller), *Theba pisana* (Muller), and *Cepaea nemoralis* (Linnaeus), introduced species which were prevented from becoming permanently established by the untiring efforts of the California Department of Agriculture.

List of Species and Subspecies Found In Los Angeles County

1. Helix aspersa Muller, 1774 (Introduced)

2. Helminthoglypta tudiculata angelena Berry, 1930

3. Helminthoglypta tudiculata imperforata Pilsbry, 1939

4. Helminthoglypta fontiphila Gregg, 1931

5. Helminthoglypta traski traski (Newcomb), 1861

6. Helminthoglypta traski pacoimensis Gregg, 1931

7. Helminthoglypta petricola zechae (Pilsbry), 1889

8. Helminthoglypta petricola sangabrielis (Berry), 1920

Micrarionta (Xerarionta) kelletti (Forbes),1950

10. Sonorelix (Herpeteros) angelus Gregg,1949

11. Glyptostoma gabrielense Pilsbry,1938

12. Haplotrema caelatum (Mqzyck),1886

13. Euconulus fulvus alaskensis (Pilsbry),1899

14. Oxychilus cellarius (Muller),1774 (Introduced)

15. Oxychilus drapernaldi (Beck), 1937 (Introduced)

16. Oxychilus allaiarius (Miller),1822 (Introduced)

17. Pristiloma gabrielense (Berry),1924

18. Pristiloma chersinella (Dall),1886

19. Hawaiia minuscula minuscula (Binney),1840

20. Hawaiia minuscula neomexicana (Ckll. & Pils,) 1900

21. Zonitoides arboreus (Say),1816

22. Striatura pugetensis (Dall),1895

23. Limax maximus Linnaeus,1758 (Introduced)

24. Limax flavus Linnaeus ,1758 (Introduced)

25. Limax marginatus Muller,1774 (Introduced)

26. Deroceras reticulatum (Muller),1774 (Introduced)

27. Deroceras laeve (Muller),1774

28. Deroceras monentolophus Pilsbry,1944

29. Milax gagates (Drapernaud), 1801 (Introduced)

30. Discus cronkhitei (Newcomb),1865

31. Punctum californicum Pilsbry,1898

32. Punctum conspectum (Bland),1865

33. Punctum conspectum pasadenae Pilsbry,1896

34. Anadenulus cockerelli (Hemphill),1890

35. Hesperarion hemphilli (W.G. Binney),1875

36. Oxyloma sillimani (Bland),1865

37. Succinea avara Say,1824

38. Quickella rehderi Pilsbry,1948

39. Vertigo ovata Say, 1822 (Introduced)

40. Vertigo californica (Rowell), 1861

41. Vertigo californica trinotata (Sterki), 1890

42. Vertigo rowelli (Newcomb), 1897

43. Sterkia hemphilli (Sterki), 1890

44. Vallonia pulchella (Muller), 1774 (Introduced)

REFERENCES

Baker, H. Burrington
1941. Some Haplotrematidae. Nautilus 54 (4): 130-136
Edson, Henry M. and Harold Hannibal
1911. A Census of the Land and Freshwater Mollusks of Southwestern Calif., Part I - Land Mollusca. Bull. So. Calif. Acad. Sci., Vol. X, No.2, pp 47-64.
Gammon, Earle T.
1943. Helicid Snails in California. Bull. Dept. of Agric-ulture, State of Calif., Vol. 32, No.3, pp 173-187
Gregg, Wendell O.
1931. Two New Helicoids from Los Angeles County, California Nautilus 45 (2): 47-51.
1944. Notes on Land Slugs of Los Angeles and Orange Counties, California. Nautilus 57 (4): 109-115.
1949. A New and Unusual Helicoid Snail from Los Angeles County, California. Bull. So. Calif. Acad. Sci. Vol.47, Pt.3, pp. 100-102.
Pilsbry, Henry A.
1939-1948. Land Mollusca of North America (North of Mexico), Acad. Nat. Sci. Phila. Monograph No.3.

Other references may be found in Dr. Pilsbry's monograph.

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NOTES ON MONADENIA

by E.P. Chace

Mrs. Chace made the first of our trips to the northern part of the state in 1928 and in 1929 she and I went up there. Since then we have made several trips to the coast redwood country and the Monadenia country north of there. We spent most of the 2 years at Crescent City- 1931-1933, and in 1946 we went up the coast to Neah Bay, Washington.

These trips and others have yielded a large collection of Monadenias - more than 1200 specimens from many colonies scattered from Marin County, Calif. to the Straits of Juan de Fuca, and some notes on how we found them.

Dr. Pilsbry, in the " Guide to the Study of Helices" 1894, first uses the name Monadenia for this group of shells and he lists 3 species 2 varieties and 3 forms. In the recent " Manual of Land Shells of North America, North of Mexico" he lists 6 species, 14 varieties, and 2 forms. In 1940 Dr. Berry described 5 more species and 4 more subspecies.

From south to north in the coastal regions we find M. infumata (Gld.), M. subcarinata (Hemp.), and M. fidelis (Gray). To us these are three basic units. Whether they are 3 species, 2 or only one is a matter of individual opinion. Here are the facts as we see them.

Monadenia infumata Gld. ranges from Niles Canyon,Alameda Co. to the vicinity of Laytonville, about 170 miles. The typical form may not go quite so far north. It is distinctly low spired and rather sharply keeled, surface uniformly dull except in or close around the umbilicus. Color bone brown or darker. Epidermis with pinched up ridges in forwardly descending lines, the base papillose. Cooper reports it as a climber or arboreal form but our collecting in this region has all been during the summer and we have always found them in the ground.

Monadenia fidelis subcarinata Hemphill. This form is found at Pepperwood, Rio Dell,Ferndale,Capetown and as far north as Trinidad, all in Humboldt Co., a distance of some 50 miles along highway 101. It is slightly larger with more rounded whorls, a higher spire and bluntly keeled; shells dark, almost black, but albinistic and blotched specimens are not uncommon. The top of the whorls have the dull matt surface of infumata, but the base is more shiny.

We have not found a sharp dividing line between M. infumata Gld. and M. subcarinata Hemp. , but they intergrade by easy steps from one colony to the next, each colony being fairly constant in its characters.

Monadenia fidelis Gray. Usually has a more globose shell and a polished surface.

Range. From Orick,Humboldt Co.,Calif. to Southeastern Alaska, where it was reported by Dr. Dall, and inland to the Cascade range. It is found east of the mountains in 2 localities- one near Klamath Lake and the other near The Dalles. Dr. Pilsbry designated Vancouver Washington as the type locality. The type was described as "Ochraceous tawny, varying to naples yellow or lighter, base chestnut brown to darker.

The species as a whole is extremely variable in size,color and height of spire. The colonies from near the coast are the most variable. Those from inland localities are more uniform. In the region between Eureka and Orick we collected in several spots and in every colony we found a puzzling mixture of characters. A few shells with some strong fidelis characters, others almost typical subcarinata and many shells that were not easily placed in either group. My interpretation of these shells is that we are dealing with hybrids.

In the region around Crescent City we found that M. fidelis had two active periods and two dormant periods each year. In the winter months it apparently burrows into the ground or leafmould after the spring rains begin it is active, during the heat of the summer it climbs up a tree trunk or up on brush and seals down, becoming active again in the fall. At the mouth of the Klamath River we found it sealed down on large rocks, 4 to 5 feet above the ground in July.

Notes on individual colonies

(1) Paradise Grove, Marin Co.,Calif. an homogenous colony of typical M. infumata Gld.
(2) Irvine Lodge, Mendocino Co. Same thing. Very little variation.

(3) Humboldt State Park. Still *M. infumata* but whorls more rounded and keel not as sharp.

(4) Pepperwood region. Higher spired with rounded whorls and a blunt keel, but with wrinkled epidermis of *infumata*.

(5) Capetown. Like the last but the epidermis is smoother. (These I believe to be *subcarinata* Hemp.)

(6) Arcata,University of California Forestry Experiment Plot. 4 shells that approach *subcarinata* Hemp. Rather dull upper surface, solid dark color, high spired and slightly keeled but with highly polished base and a faint to strong peripheral band.
7 shells, lighter colored, straw or brown tops, dull surface, 3 show multilineate markings. Bases are blotched,straw and b brown and polished. The dark peripheral band on all. This colony seems to us to be hybrids.

If this interpretation is correct then *subcarinata* cannot be a variety or subspecies of *M. fidelis* as Dr. Pilsbry lists it but it could be a variety of *M. infumata* Gld. as the shells from the area south of Pepperwood are intergrades as I noted earlier in this paper.

(7) Trinidad, Humboldt Co.,Calif. plus a colony near McKinleyville Humboldt Co. 2 good *subcarinata* , the rest dull muddy looking tops, some very dark, others with some dark straw color,polished bases that are either dark or blotched. Hybrids again.
Variety *trinidadensis* Talmadge , a colony of uniformly dark, small shells, comes from the top of an outlying rock near Trinidad Head.

(8) Orick, Humboldt Co. No dark subcarinate shells in this colony. All of these shells have the dark peripheral band, smooth tops (no matt surface or dull) mostly straw colored and with dark polished bases. Some with narrow straw-colored rest stages on the base. 2 specimens are warm reddish brown on top. Some of these were collected 10 feet from the ground on tree trunks. 4 show the multilineate marked tops of variety *callidina* Berry. This we consider our southernmost colony of pure *fidelis*.

(9) Dads Camp, Del Norte Co. This is the type colony of *M. f. callidina* Berry. Shells average large and somewhat shiny. A few albinistic shells in this colony. Dr. Berry's description is very clear.

(10) Endert's Beach, 5 miles south of Crescent City. All characters considered this is the most variable colony in which we have collected. Some specimens are typical *callidina* and one specimen could not be separated from a set of var. *smithiana*, other specimens are very much like var. *pronotis* Berry and would be hard to separate if mixed into a set of that variety. This colony is in a rock slide on the ocean bluff.

(11) Battery Point, Crescent City. This colony is *M. f. callidina* Berry but averages much smaller in size, average 27-28 mm. An exposed situation; no cover other than grass and weeds.

(12) Lighthouse Island, Crescent City. About 1000 feet from Battery Point. Brush cover on most of this small island. No typical *callidina* in this strong colony. Variable in size, 26 to 37 mm in diameter, and in height os spire. Color predominantly dark. 2 or 3 shells suggest var. *callidina*, 2 or 3 suggest var. *smithiana* and more suggest var. *pronotis*, but without the worn appearance of most specimens of that variety.

(13) Foot of 6th St., Crescent City. On the ocean bluff. Similar to the last colony but 3 specimens have the markings of Var. *callidina* but not the size.

(14) Woods near Crescent City. Shells small to large, predominantly dark, warm tawny brown with a few lighter ones. 2 or 3 approach var. *callidina* in size and inflated body whorl.

(15) Sawtooth Point, west of Crescent City. Shells mostly light colored and close to var. *callidina* except for size. Smaller.

(16) Point St. George, about 9 miles from Crescent City. Very exposed at the edge of the bluff where the type colony of Var. *pronotis* is living. Only a little grass and weeds for cover. Shells small, average 27 mm. and badly worn, also thinner than normal *fidelis*. A few hundred yards away, under better cover shells were found that were larger and not as badly worn in appearance.

(17) Hiouchi Bridge, 9 miles east of Crescent City in the Smith River Valley. This is the type locality for *M. f. smithiana* Berry. Shells average about 33 mm. Max. diam., high spired, and with a very varnished appearance. Mostly brown tops with darker blotches but some light tops. Quite constant in these characters at the type locality but shells in other nearby colonies are a bit larger and flatter. Occasional shells that fit the description of *M. f. smithiana* are found in colonies a long distance outside of the Smith River Valley.

(18) Colony along and near Craig's Creek, Del Norte Co. Geographically these shells should be Var. *smithiana* as this is only a few miles up the river from Hiouchi Bridge. Some very dark shells and some light colored ones. Not as high spired not as varnished appearing as *smithiana*. I collected here in July,1932. That fall a brush fire went through that region. In July, 1933 I again went up the trail along Craigs Creek and found as many shells as I had the year before. How did they escape the fire ? Either well buried or up the trees high enough to escape the heat.

(19) Pistol River, Curry County, Oregon. The type locality for *M. f. berylica* Chace is in a patch of willow trees between the highway and the river. Shells are large and have a green base. A colony of similar shells are at Wedderburn,Oregon.

(20) Port Orford, Curry County, Oregon. Shells from a colony on the bluff near the harbor are small and green. Except for the color they might easily be referred to Var. *pronotis*. Shells from the nearby woods are typical *beryllica*.

(21) Bandon, Coos Co., Oregon. Shells from the bluff at this point are like those from the bluff at Port Orford but not quite as green.

(22) Coos Bay areap Shells from 3 localities in this area are very similar in appearance. Brown tops predominate with a scattering of straw or tawny tops with darker blotches on many of them. One specimen from this region resembles *M. f. smitheana* very closely. Another specimen has the light base with a dark spot around the umbilicus as in Var. *semialba* Henderson, although the light portion is amber instead of straw or yellow.

(23) Scottsburg, Douglas Co., Oregon.

Three colonies along the Umpqua River in mixed woods. Shells in these colonies are predominantly light colored tops, tawny to straw yellow with darker blotches and a dark base. One specimen in these sets has no dark band at the periphery, the light straw color of the top going down below the periphery to the dark color of the base.

Colonies from here north show less variation either within themselves or from colony to colony. The redbrown or yellowish brown tops frequently with darker blotches and dark bases being almost universal. We have 3 specimens from the bank of the Bogachiel River, Clallam Co.,Wash.

Away from the coast we have collected along highway 99 in Washington and Oregon. I think that almost all the shells from this region can be classed as *M. fidelis typical*.

Those from Washington and Portland, Oregon region usually have tawny tops with darker blotches and those from the Umpqua Valley and adjacent regions have reddish brown tops without blotches of darker color.

Siskiyou and Trinity Counties, California

Several species and varieties have been described from this area but we have done very little collecting in it so have no comments.

The same can be said of the area east of the central valley of California where *M. mormonum* and *M. hillibrandi* are found. We have a few specimens of each of those but have done little collecting in that region so again no comments.

Returning to *M. fidelis* and its varieties. When we published *Monadenia fidelis beryllica* we stated that in our opinion it was " a good geographic race but probably had very little biologic value. The name is a cabinet convenience." We feel that that statement is true to some extent of the other varieties of *M. fidelis* I think we are fortunate that Henry Hemphill did not discover the colony of *M. fidelis* at Enderts Beach. If he had I am afraid that we would have had several more varietal names in the record.

Perhaps you feel that we are inconsistent in putting so little importance on subspecific names in *Monadenia fidelis* as long as we maintain that " given a representative set of shells without a locality label we can say, probably within 25 miles whence it came" Perhaps you are right. It depends upon the value that you place on the characters on which the subspecies is based.

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The enemy of the large *Achatina fulica* Fer referred to in recent articles in our paper is *Gonaxis monrovia* Rang from Liberia. It was hopefully suggested that this small carnivorous canibal snail might answer the control problem of the *Achatina*. The exact name of the small snail was not given us before. Of course, all wish the *Gonaxis* good hunting and a hearty appetite.

We will have specimens of this *Gonaxis* on exhibition at the next meeting of the Conchological Club.

****

Mrs. Effie M. Clark, 18837 Brickell Way, Haywood, Calif.

This is the new address and Mrs. Clark would appreciate hearing from the host of her friends made during the years when she served us as secretary.

August 2nd Meeting of the Conchological Club

Vice-president Mayhew presided and after a brief business meeting Mr. Grau, program chairman introduced the speaker of the evening, Mr. A.M. Strong who talked on West Coast Conus. As is usual with an unusually fine and interesting talk the meeting ended in a general discussion.

Our secretary was unable to attend and Mr. Morris M. Caruthers took notes for her as Secretary pro-tem.

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MOLLUSCA

We have the final issue of Mollusca and read with sincere regret the letter to subscribers from Mr. Paul H. Reed, the publisher. Mr. Reed has made a very genuine contribution to conchology and Mollusca will be missed.

It seems to be apparent that a periodical devoted entirely to Mollusca needs the support of an institution with an endowment. We comment not boastfully but sadly because we know very well the limitations of our little mimeographed paper, but it is probable that the Minutes of the Conchological Club now remain the sole publication financed 100% by those who care to read it.

****

A Few Conchological Notes

We recently received a number of specimens of *Haliotis sorenseni* Bartsch taken by diving off the coast of Los Angeles County. The fact that perhaps as many as 50 specimens were taken is interesting.

In checking over the microscopic species taken from this lot Mrs. John Q. Burch found one species that is rather interesting to note. It is *Philobrya setosa* (Carpenter).

In past years several of us have worked more or less extensively on the Timm's Point Cool Water Pleistocene deposit of San Pedro. A. Clark published a paper listing the species he found, then Mr. George Willett worked on it extensively adding a good many species to Clark's list, then John Q. and Thomas A. Burch worked over a few tons of it adding some more species to the list.

Now Mr. and Mrs. R.H. Mayhew have veen working on Timm's Point and it is of interest that their work had added the following species found neither by Clark,Willett nor the Burches.:

Iselica fenestrata (Carpenter)

Puncturella multistriata Dall

Vermicularia eburnea (Reeve) - to be studied further but apparently what we have been giving this name.

****

A Few Recent Publications

Divergent methods of development in morphologivally similar species of prosobranch gastropods by Wesley R. Cow, Jr. Morph v. 84, no.2

This is another contribution of Dr. Coe's fine work on the Crepidulidae.

Revista De La Sociedad Malacological " Carlos De La Torre" Vol.6, No.3. Junio 30,1949. This issue continues the high quality of the former issues.

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Note on *Axinopsis* - by Dr. A. Myra Keen

I have just noted another homonym among our West American genera. *Axinopsis* Sars, 1878, must fall because of the prior *Axinopsis* Tate 1868, proposed for a fossil group. It is possible that *Axinodon* Verrill and Bush, 1898 (Proc. U.S. Nat. Mus., vol. 20, p. 975) can be used for *Axinopsis* Sars, although Dall (ibid., vol. 23, 1901, p. 784) made it a synonym of *Axinulus*. The illustrations and descriptions seem to me to be very similar. It appears that *Axinodon* differs from " *Axinopsis*" only in having a broader ligament and somewhat stronger denticles under the beak. One should study the types before making a decision, however, and it is to be hoped that we can persuade somebody on the East Coast to look the matter up. After all, it concerns them, too, as there are one or more Atlantic species of " *Axinopsis*".

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Members who are actively collecting are requested to send specimens of *Aletes* and other worm tubes to Dr. A. Myra Keen, Dept. of Geology, Stanford University, California. Dr. Keen is studying this group so badly in need of revision.

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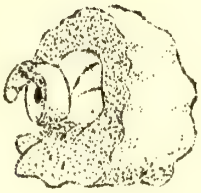
Trigonostoma milleri new species



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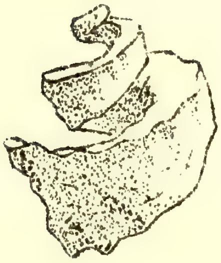

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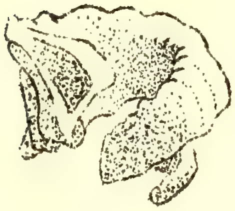

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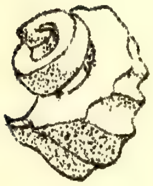

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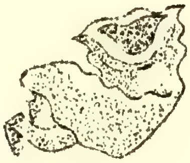

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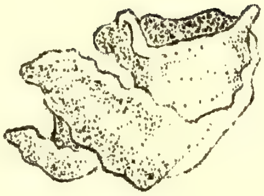

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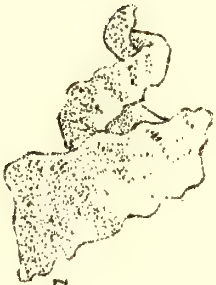

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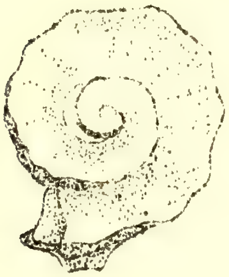

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A NEW TRIGONOSTOMA FROM CENTRAL AMERICA

by John Q. Burch

Trigonostoma milleri new species.

Shell widely umbilicate, loosely coiled, entirely lax, whorls not touching. Color cream with fine reddish brown spiral cords continuous. Aperture triangular, angulated in front. Whorls strongly tabulated with heavy tubercles above and below. Three low somewhat obscure columellar plaits and a strong basal fold.

The figured specimen has a diameter of 17 mm. and an altitude of 18 mm. Figures 4 and 5 are actual size of the specimen, the others slightly enlarged.

About fifty specimens of this species were collected on the beach at Tambor, near Puntarenas, Costa Rica by Professor Herman W. Miller in the spring of 1947.

The type specimen has been sent to the United States National Museum. Paratypes will be placed in the California Academy of Sciences, Stanford University, and the Los Angeles County Museum.

The only species in the author's cabinet in any way resembling this shell is a set of *Trigonostoma goniostoma* (Sowerby) from La Paz, Lower California, but the differences are too radical to discuss.

The following notes on the nomenclature may be of interest. *Trigonostoma* Blainville,1827, Manuel de Malacologie et de Conchyliologie, p. 652. Type (by monotypy)- *Delphinula trigonostoma* Lamarck. (Fide Woodring, Carnegie Institute of Washington, 1928). Thiele (Handbuch der Systematischen Weichtierkunde,1929) lists *Trigonostoma* Blainville 1826 as a subgenus of *Cancellaria* with type C. (T) *trigonostoma* Deshayes. Grant and Gale (San Diego Society of Natural History, Memoir No.1, 1931, p.622) give a note as follows " ... *Trigona pellucida* Perry (= *Cancellaria trigonostoma* Lamarck), the monotype of *Trigona* Perry. In this connection Mr. A.M. Strong in Minutes of the Conchological Club of Southern California, No.49, p.8 comments " *Trigona pellucida* Perry is very similar to, if not identical with *Delphinula trigonostoma* Lamarck, and both come from the same general locality. The use of Blainville's name may be open to question as it is considered by some to be a vernacular name. However, it has been used by many writers on conchology and paleontology."

The author is indebted to Dr. A. Myra Keen for advice on the generic classification.

We wish to thank Mr. R. Winckworth of London for the following information in reply to our query and discussion about whether or not this species is identical with the type species *Trigonostoma trigonostoma* (Lamarck) " I can confirm that *Trigonostoma trigonostoma* (Lamarck) occurs in Ceylon, which is the locality given in early literature, e.g. Sowerby, 1836, Conchological Illustrations, *Cancellaria* no.44, and Kiener, 1844, Coquilles Vivantes, Cancellaria p.42. It was Crosse in 1861, J. Conchyl.9,229, who made the suggestion that as all known examples of this species had come from Holland, perhaps the locality should be Moluccas, not Ceylon. This misleading remark no doubt led Tryon to give the locality as Ceylon? Moluccas ? It is certainly a rare shell. My brother collected a great deal in Ceylon, but only once obtained a specimen. This was dredged living in 8 fathoms on the Ceylon Pearl Banks ,as I recorded in Proc. Malac. Soc. 24,90. The characters of the shell and of the

con. p.4

soft parts agree with those of Cancellariidae."

After this matter came up the National Geographic Magazine July,1949, came out with their fine issue of colored plates and have a very good figure of Trigonostoma trigonostoma on page 71, Fig. 1.

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The following will be a synopsis of a talk and general discussion led by John Q. Burch at the September meeting of the Conchological Club of Southern Califonnia.

We are all disposed to laugh at the errors of many prominent scholars who have described as new species and new genera the very young of well known species, but most of us who have struggled with these infants in a serious effort to classify them, are disposed to be very charitable. The rudimentary nudibranch has a well developed shell. True enough it discards its shell never to replace it, but that doesn't help the fellow looking at it under the microscope and trying to make a key to microscopic genera work. In this connection I hesitate to mention such things as Roperia roperi Dall , new species and new genus described from the very young of the common Ocenebra poulsoni. I say hesitate to mention it because I am not one to overlook the fact that Dr. Dall left a monument of scholarly work insuring him a place in the hall of fame of the great conchologists of all time, and for every error he made he left a hundred or hundreds of solved problems. No man could turn out the vast amount of work that Dr. Dall did and not make some errors. My observation has been that the scholar who has made no errors has done little other than not make errors.

A short time ago one of our young collectors who has been earnestly studying his shells with the aid of all the books available brought into my store some small pelecypods that had him baffled after having studied them carefully. At one glance I advised him in a very professorial manner that he had the very young of our large Saxidomus nuttalli . I hope that I will be pardoned for not telling him of the time years ago when I took some of those same small shells with the shining black band into the late George Willett, who advised me of what I had. But I honestly think that, as difficult as they are, it is easier to classify a batch of very small pelecypods than it is to work the same type of gastropods. The hinge seems to develop early in pelecypods and Dr. Keen's Key to Pelecypod Genera will work on the small as well as the large.

The very young of some genera will always be a puzzle to me. In fact, I wonder if it is really possible to distinguish between the very young of a number of species of Strombus for example. Young Pterocera or Lambis show no indication of developing their spider like fingers until they are almost adult. I remember the first young Aporhais to come my way. This is the well known Pelican's Foot of European waters and there are other species from our Atlantic coast. Anyway the very young are perfectly symmetrical resembling a Turritella making it difficult to believe that you have the young of the odd triangular shaped adult. The young of our West Coast Strombus galeatus and also for that matter the young of the large Atlantic Strombus gigas leaves one at first incredulous.

I will still not thank any of you for bringing to me for classification the very young of our large vermetids, worms. In fact, I have more than my share of trouble and errors with the adults not to mention the fact that I have had lots of this group up to ¼ inch in length that resembled a small Turritella in every respect

showing no indication of the distortion later developed. And the fact that they are so close makes it doubly difficult. In most systematic arrangements the Vermetidae is placed immediately before or after Turritellidae.

A study of the nucleus of the juveniles is of major importance in an attempt to classify them. There are certain groups to consider each having a definite shape- for example the nucleus of a Volute is very large and irregular; in *Fusinus* it is cylindrical; in *Pyramidellidae* it is oblique; and some rather amazing such as the spiral nucleus of many of our limpets which are quite symmetrical when adult. I have never seen a key to the characters of the nuclei but would very much appreciate having a copy if there is one.

In fact, in many instances the only possible key to your problem of whether you have a microscopic genus or a juvenile is a study of the nucleus. This is probably one of the reasons why some have complained loudly when they went into a large and beautiful collection to check and found every specimen they wished to study had been nicely cleaned with acid making a microscopic study of the embryonic shell impossible.

The embryonic shells of many of the bivalves are almost as puzzling; The very young of our large ungainly *Hinnites* is, as you know, a very beautifully colored small *Pecten*. And the young of the fresh water Unionidae, as those of you who were here to listen to Dr. Howard's talk, will recall, resemble in no way the adult.

The actual chemical composition and structure of shells differ considerably and are of some interest. Generally speaking they are all composed of calcareous material mixed with organic matter known as Conchyolin. Shells may also be divided into Porcellaneous (those presenting a dull lustre like china or marble. Such things as *Tivelastultorum* Mawe, our Pismo Clam is an example); Nacreous or pearly shells- (those are composed of alternate layers of very thin membrane and carbonate of lime, with minute undulations of the layers). The nacreous shells are seldom found in fossil deposits of any age. And the Fibrous shells are composed of layers of prismatic cells that when thick breal up into vertical pieces. Mr. Morris Caruthers mentioned having found a fossil *Pinna* which was considered very unusual. The oyster with its laminated structure separates into horizontal pieces. The Pinna has a very peculiar cell formation. The Brachiopoda consists of elongated and curved cells matted together. These shells are so characteristic that the smallest fragment may easily be determined.

Shells have resting periods during winter or at certain periods during which time they cease to grow. We are all familiar with the common growth lines on pelecypods but seldom stop to think that the varix of a *Murex* is a similar thing, or perhaps the rows of cups on a *Tridacna*.

We had some rather attractive and interesting *Spondylus* from Zamboanga in which some parts of the mantle secreted more than others so that the cavities filled with fluid were left in the substance of the shell. You could shake the entire shell and it would be like shaking a bottle of liquid.

Land shells usually start life with a thin open lip and later when adult, thicken the lip and some are so enormously toothed that it is a marvel how the animal can get in and out. Here is an example of that in this Pleurodonte from Central America.

The ability to dissolve portions of their own shells at will is well known. Examples are the *Murex* removing those spines that interfere with growth; by the *Thais* and others wearing away the

inner wall of their aperture.

The Neritidae and others dissolve all of the internal spiral column of their shells.

The ability to dissolve portions of its own shell though is perhaps most unique in the Cypraea and the Conus. Conus removes all but a paper thin portion of its inner whorls. Cypraea goes still further and continues removing the internal layers of its shell wall and depositing new layers externally with its overlapping mantle until in many cases all resemblance to the young shell is lost in the adult. In this connection it may be noticed that this habit of the Cypraea has puzzled many of the greatest of the older conchologists. Bruguière, Lamarck and others of that period believed that as the animal increased in size it was obliged to leave its shell shedding it more or less as a crab, in order to make a new and more capacious shell. Wood was also of this opinion. Both Sowerby and Reeve were of the opinion that Cypraea had the ability to absorb the outer lip completely in order to expand its shell. Both theories are now thought to be decidedly fanciful. However, the fact remains that the growtn of the shell in Cypraea is one of the great marvels of conchology, and the thin light shells usually of an entirely different color pattern and known as ' young' shells are to be found in all collections. These so called ' young' shells are going through one of these periods of growth during which the animal has dissolved much of its shell to rebuild. To call them ' young' is nonsense though because the largest specimen I have ever has was of this type, and we have all of us taken Cypraea in what we call the " Bulla" stage which is the real ' young' Cypraea. In this stage of growth the shell has a prominent spire, a thin and sharp outer lip and is covered with a thin epidermis. The adult form expands and completely conceals the spire and covers the entire shell with a shining enamel. In this connection it is interesting to note that while all shells have a periostracum, sometimes transparent and in others thick and opaque, the Cypraea is unique in actually covering the periostracum with an additional layer of shell deposited externally.

It frequently happens that spiral shells as they become adult cease to occupy the upper part of the shell. This vacant space is filled with solid shell in some as Magilus; or as in our own Truncatella or Acmea , or the Caecum it is partitioned off with the result that the deserted apex becomes dead and brittle and breaks away leaving the shell truncated or decollated.

Very young Caecum are perfectly spiral shells, then a septum is formed , the spire is detached, and as the shell progresses another septum is formed and again it suffers truncation with the result that the adult Caecum is a simple curved tube with the small end always being closed, which by the way is well to remember because in a few species one may be disposed to confuse them with Cadulus and Cadulus always has the small end open, never closed.

I will make a little mention of the internal shells. These are usually horny or chitinous and transparent. They are to be found in some of our squids.

The shell of Tethys is well known. I have no doubt that there are some methods of classification for these things but to me they have been singularly unimportant. I have the internal shells of very different species of this group both from our own coast and from Australia and elsewhere. There seems to be no well developed nucleus in them and at least as far as I am concerned they may as well not be in the cabinet. It would be indicated that the animal itself is necessary for any taxonomic work.

The shell of some of the Cephalopods such as the Sepia are not only characteristic but have a cell design of their own.

The shell of Nautilus is made in an entirely different manner, the internal or pearly part being formed by the body of the animal while the outer porcellanous layer is constructed by the mantle margin. Other oddities of this strange animal with its shell could well be the subject of a long discourse.

Spirula is another oddity being composed entirely of pearl and hanging free in the hinder part of the animal. Incidentally there are lengthy dissertations on the question of the affinity of the fossil Ammonites to Nautilus and to Spirula. It seems that they were not too close to either but probably more closely related to Spirula, although it is a popular idea that Nautilus is a living evolutionary descendent of the Ammonite. Unfortunately like most efforts to set up evolutionary chains obstacles develop.

Argonauta was almost overlooked. The subject of beautiful flights of fancy by the poets from the earliest days- discussed by Pliny and other ancient writers whose ideas were entertaining but perhaps largely because they have been long proven to be 100% incorrect. The shell of Argonauta or the egg nest is formed by the arms of the female only, and not by the mantle as in true shells. It is of a peculiar fibrous, corneo-calcareous texture- distinguished again by the total lack of a distinct nucleus and by the composition of two layers, one placed upon the other. The male Argonauta, of course, has no shell, and the female can disengage herself from the shell on occasions. It is little wonder that the animals were originally described as Ocythoe and the shell as Argonauta.

* Note* A good part of the above comments are not based upon personal observations or research, but are no doubt gleaned from Tryon, Dall and many others.

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MINUTES OF THE SEPTEMBER MEETING OF THE CONCHOLOGICAL CLUB

The club was called to order by the vice-president, Mr. Richard Mayhew at the regular time and place. Twenty-three members and guests were present.

The minutes of the August meeting were approved as printed. There was no business to transact. A very welcome letter from Mrs. Effie Clark was read, We were sorry to hear that Mr. A. Sorensen was ill and in the hospital at Pacific Grove. It was unanimously voted to accept Mr. Munro L. Walton as a member of the club. The editorial committee extended their appreciation to Mr. and Mrs. E.P. Chace and daughter for " putting out" the August minutes. For the benefit of newcomers the educational committee explained their willingness to help any who ask for it.

Mr. Grau introduced the speaker, John Q. Burch, who read a most interesting and informative paper on the differences in the forms of certain shells during various stages of their growth. He showed a set of Cypraea tigris as an illustration. Speaking of the growth of shells he also discussed repair work and the three types- porcelanous, nacreous and fibrous, of shell structure. He reminded us that Argonauta is not formed by the mantle but by the arms of the female and it has no nucleus. The ability of certain shells as Purpura, to dissolve portions of their shell at will was mentioned. After some discussion on the odd habits of shells and their repairing abilities, the meeting was adjourned.

Respectfully submitted. Harriette Gillis.

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Mr. and Mrs. Donald B. Cordry, San Jeronimo #28, Tlaltenango, Cuernavaca, Morelos, Mexico. The new home of the Cordry's.

Mrs. A.W. Gillis, our secretary has been ill. We all wish her a speedy recovery.

Mr. A. Sorensen, 247 Granite St., Pacific Grove . We are happy to report that he is now out of the hospital and back at his home greatly improved.

Professor Herman W. Miller- Apartado 329, Santa Clara, Cuba. This is a surprising jump from his post in Costa Rica where he has been for so many years.

M.K. Jacobson, 455 Beach 139 St., Rockaway, New York. " Just got back from a nice collecting trip to Jamaica with Alcalde. Collecting of land material was only fair, too much drought in too many parts of the island. But we had a good time. Problem: I have a lot of Cuban land shells from Pinar del Rio and Las Villas in duplicate. Wonder if you could let me know of anyone out west who would be willing to exchange these shells for land and freshwater shells of the far west.

W. Thurgood, Hon. Secretary of the Conchological Society of Great Britain and Ireland. In one of our recent issues we published a statement that Mr. Thurgood had resigned his post. This was error and the following letter explains: " A few days ago Mr. Don Fisher of 576 King Lane, Alwoodley, Leeds, handed me Minutes 91 of the Conch. Club of Southern California. He had previously handed me Minutes 90 addressed to him. I have noticed that we have not got the Minutes referred to at the Leeds City Museum addressed to the above Society (C.S.G.B.I.). There appears to be some confusion. The Yorkshire Conchological Society, although a branch of the C.S.G.B.I. is an entirely separate organisation. Up to 31st Dec. last I was Hon. Sec. of the Yorkshire Society- and at the same time being Hon. Librarian and Curator for the C.S.G.B.I.- in my letter 10th Feb. last headed " Directory of Conchologists" I advised you that I was no longer Hon. Sec. of the Yorkshire Conch. Soc., my successor being Mr. W. Don Fisher. Somebody at your end must have concluded that I had resigned my post as Hon. Librarian and Curator for the C. S.G.B.I. and decided to send future copies of the Minutes of the Conch. Club of S. Calif. to Mr. Fisher. Will you please see that futute Minutes of the Conch Club are sent to me. I am given to understand that our Journal of Conchology is sent to you in exchange. The Yorkshire Conchological Society do not publish.

Miss Mary Nimitz, 728 Santa Barbara Road, Berkeley 7, Calif. " Dear Mr. Burch: Allyn Smith suggested that I report to you the finding of *Venerupis philippinarum* Ads. & Rve. near the entrance of the San Rafael yacht canal last September fifteenth. He said he thought it was a new locality record. The empty valves were scattered about a large colony of *Volsella demissa*, and frankly, how either of them could live in such unattractive ill-smelling surroundings is more than I can see. I took the *V. philippinarum* to Mr. Smith to identify because I am sending it to a couple in the Netherlands who had written asking an exchange of shells. As I don't believe they are listed in your directory; they are, for the record, a Miss A.M.J. Heymans and her fiance R.T. Simon Thomas, whose address is Orange-laan 32, Huize de Vennen, Nunspeet, Netherlands. They are interested in both land, marine and freshwater species."

Glenn R. Webb, Ohio, Illinois " The arrival of the Minutes 93 of the Conchological Club of Southern California reminded me of my tardy payment, and so I hastily enclose $5, for this and next years interesting issues. Having labored carefully over a bit of work, and then relievably having deposited it in the mails in the sanctum of " registered" only to find it returned pock-marked by editors who have not hesitated to reseume to inflict the wonders of their own prosology, it is a matter of enjoyment to return to the democ-

-ratic, scientific, freedom of the Minutes of the Conchological Club. It seems strange that there should be a growing tendency among our supposedly " scientific" journals to return to the authoritarian editorialism of the pre-reformation era. I do not conceive how scientific freedom of speech is to be retained if the art of editing transcends that of advisory criticism. Having seen manuscripts returned with such gems of freedom as: We will be glad to publish your paper if certain indicated changes are made. It would seem that what the editors meant was this: Danger: error and ambiguity of statement considered in items ... etc. Under this later circumstance our writer may well study the suggestions of the editor but he must still have the right to publish with the phras-iology of his own choice. In that case the editor has the perfect right to publish any objections to the paper that he believes are scientifically valid, but so does the entire body of fellow workers.

For these reasons and as one who has become malacologically " fledged" in part from the scientific activities of the Conchological Club of Southern California , its self-financed status is the more a matter of sincerely appreciated effort. May it grow a thousandfold and more-- Proabably Benjamin Franklin would be a member were he a Southern Californian."

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More about the giant snails- At the last meeting of the club we has a set of the small African enemy of the giant Achatina fulica to examine. They are certainly innocent appearing babies to kill off such large and tough appearing characters as the Achatina.

The latest we heard was that some of them were almost introduced by a freight shipment from Saipan to Baltimore. Saipan seems to be badly overrun with them.

And in connection with them we have following sent in by Miss Ruth Coats:

FROM THE JUNGLE FOLK OF AFRICA by Robert H. Milligan

There is one other characteristic found in the forest, though personally I have not heard this sound when far from the coast. It is a single monotonous note, a little like a low tone on a flute, about ten seconds in duration and withour rise or fall, A doleful sign or sob of unending remorse. This sound, although it always seems to be distant, is even more difficult to locate than the other. It is human more than all other sounds of the forest, and yet sepulchral, and the superstitous mind is easily persuded that it issues from the unseen world. The source of it is rather extra-ordinary, for according to native testimony it proceeds from a certain gigantic snail as it slowly draws itself into and out of its shell. This theory is difficult either for white man or black man to verify, for the sound is heard only at night and it ceases as one approaches. But the native is by no means likely to be mistaken.

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Miss Coats was ill this spring but we are happy to report that she is now recovered and we hope to have the pleasure of a visit from her before long. We hear that she is making a visit to San Francisco and Los Angeles will be upset indeed if she fails to come down the coast.

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An easy way to clean some shells- During one of our round table talks at the club recently a matter came up that I thought was common knowledge but a number seemed to find it new to them. It came up through a question about the fading of Oliva to pure white, and I suggested that I thought this was the natural color of the Oliva because my experience had been that the Olividae will take almost anything and retain perfect color. What I had in mind was the custom

of commercial collectors of using Caustic Potash to clean them. This will, of course, eat the animal matter out of the shells so that they may simply be rinsed out in fresh water, dried and be ready for shipment. On inquiry I mentioned that perhaps the easiest way for a field collector to accomplish this would be to visit the nearest grocery store and buy a few cans of Draino or some similar product. Of course, Draino is sodium and the potassium product for some reason seems to work faster, but Draino will do the trick all right. Of course, there are some genera that will not stand it. I certainly do not suggest putting any fine Cypraea in this solution although I have known some who claimed they did so without injury to the color. I have never tried it on good Cypraea. It is almost the only thing to do though to a lot of things such as the *Cerithium*, and even *Turritella* etc. are next to impossible to clean otherwise. I have seen commercial collectors with barrels in rows all full of shells, and they would clean the animal matter out of an entire barrell of shells in a few hours.

One of our members brought a fine large *Murex* into the store last week and asked what if anything could be done for it. A little of the animal had been left in it and the odor was rather more than noticable. He said that he had tried pouring alcohol and whatnot into it and soaking it in almost everything and it still " stunk up the place". I suggested that he take a little of the parafin found around most homes for canning purposes and pour just a little of the parafin into the aperture of the shell. This at least seals the stink inside of it.

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A Few New Publications Received-

The Nautilus, Vol. 63, No. 1, July,1949. It is probable that all who receive these Minutes also receive the Nautilus. In any event they should. This issue contains as usual some very fine papers but none directly affecting the fauna of this coast. That is unless it might be the very interesting paper of C.G. Aguayo " Malacology and the official list of generic names." It is rather surprising to note that only 29 generic names have been accepted by the International Commission during all the years of its existence. Not many when compared to Schilders estimate of 11,000 genera and 450,000 species of mollusks (including fossil).

We are pleased to add a number of separates to our library, the work of Carlos G. Aguayo and Miguel L. Jaume. While we have a number of them already in our file of the Revista de la Sociedad Malacologica " Carlos De La Torre", we have not been receiving Torreia, Publication Ocasional Del Museo Poey. Of course, we are familiar with Torreia but had thought it entirely devoted to other branches of natural science. We have one very interesting paper Torreia, Num. 13, Mayo 30,1948." Un Singular Genero Nuevo De Moluscos Terrestres". It would be interesting to know what other papers dealing with Mollusca have been published in this periodical.

T. Pain sent us several reprints from his work in the Proc. Malac. Soc and the Journal of Conchology. He continues his work on the Pomacea from South America. My personal experience has been to find this a difficult group. I have somewhere up on a high shelf about 100 of the big ones largely from the tributaries of the Amazon in Brazil. The last time I worked with them I had either 100 species or one, no two exactly alike.

National Geographic Magazine- July,1949. It is to be hoped that all have copies of this beautiful shell issue. It is already in demand and selling for a premium.

Circulares De La Sociedad Malacologica " Carlos De La Torre"- These mimeographed papers contain a surprising lot of information not noted elsewhere. They a re something of a malacological newspaper. For Huly a nd August alone they published 22 pages.

The September issue of Turtox News has a cover picture of a very interesting sight. It is a photograph of our California nudibranch Hermisenda in the act of laying eggs. The photograph was by Mr. Woody Williams.

Chicago Natural History Museum, Annual Report for 1948. This is a beautiful report. It would have to be to cause one as far away from Chicago as Los Angeles is to sit back and read with interest of the multidudinous activities of this great institution.

Auckland Museum Conchology Club- Bulletin No.4 . This consists of several papers containibg a great deal of very valuable information, staples together between heavy paper covers. Another thing to mention is that the last page of figures have been colored by hand.
We have also received a paper with an excellent sheet of figures attached on the Anatpmy of the Fresh Water Mussel by J.D. Jepson.

Glenn R. Webb sent us two papers; new to our library: Sex Organs of Mating Polygyrid Landsnails, Illinois Academy of Science Transactions vnd. 40,1947 and Mating of Some Zonitoides (Ventridens) Species of Land Snails, The American Midland Naturalist, Sept. 1948.

Hasslein,Ludwig Molluskengesellschaften alpiner Rasen in Allgau, Naturforschende Gossellschaft and E. Hasslein: Die Mollusken (ausser Najaden) Bambergs, Naturforschende Gessellschaft Bamberg Oct. 1948

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MINUTES 95
NOV-DEC 1949
CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription $2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to your editor,

John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 37, Calif.
Telephone Ax 3-5710
Home telephone Ax 2-7965

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We have an interesting personal communication from Mr. and Mrs. Albert B. Bronson, Guam regarding the poison Cones-

" We had quite a number of Conus striatus and Conus textile which are very common here, also a few Conus geographicus. Let all collectors beware of handling these shells as we found that an occasional individual was exceedingly active and agressive while the majority cannot be teased into defending themselves. Also if one does care to strike, the radula sheath can be extended to any part of the shell so grasping the shell by the base does not insure one against injury. Sluggish as they seem to be, one C. geographicus that we were trying to stimulate with drops of fresh water, suddenly when pricked with a hypodermic needle, extended its sheath a full 3½" and discharged its venom completely, at least two good sized drops. The aim was good too and if the needle had been a finger the experiment might have been fatal.

I was much interested in your discussion of the young gastropods and have collected quite a few Cypraea in the bulla stage.

We have so much fun collecting out here that I some times feel guilty out there on the reef in crystal clear water with so much life teeming on all sides that no naturalist could hope to recognize it all.

I was fortunate enough to get acquainted with Yoshio Kondo and we went collecting several times together. He was very busy gathering data on the African snail, but we got in a couple of week ends together. Yoshio was also collecting Conus of poisonous species to send to Dr. Clench."

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Dr. L.G. Hertlein, California Academy of Sciences, Golden Gate Park, San Francisco 18, Calif. " ... Your note of Nov. 7 also the paratype of the Trigonostoma were received today. Thank you very much for depositing this specimen here. It will be assigned a number in our series of type specimens and will be available to any serious workers who wish to see it.

You may recall that at the meeting of the A.M.U. Pacific Division at Long Beach last June, a committee was appointed to draft a letter to the Surgeon General regarding confiscation of molluscan collections at the United States-Mexico boundary. A letter approved by the committee was sent to the Surgeon General and a reply was received from John H. Hughes, Chief, Entomology Section, Division of Foreign Quarantine.

According to his letter collectors should experience no difficulty at the border if uncleaned shells are preserved in alcohol, formaldehyde or otherwise rendered harmless. I thought that perhaps you might wish to include Mr. Hughe's letter in the minutes. "

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" Your letter of Oct. 26,1949, stating that several shipments of mollusks preserved in alcohol or formaldehyde, " were taken over by Government officials at the United States-Mexico boundary, " has been referred to this office for reply.

Public Health Service Regulations governing the importation of etiological agents and vectors are not applicable to such materials which have been preserved in alcohol,formaldehyde or in any manner which would render them harmless.

We do not wish to interfere with scientific research in any way and will do what we can to facilitate movement of mollusk shipments as well as others. It is hoped there will be no further delays in shipments of mollusks to the members of your society. However, if there are, please advise us promptly. Sincerely yours,

John H. Hughes, Scientist
Chief, Entomology Section
Division of Foreign Quarantine

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Professor H. W. Miller,Santa Clara, Cuba. " .... will you circulate a question in the Minutes asking if any one else knows about a variety of Nerita peloronta with only one white tooth on the bloody spot instead of the normal two ? I have some and know of a a few others in private collections. I want to find out if its range is limited to one locality or if it happens more or less regularly."

Paul H. Steele, Box 935, Sacramento, Calif. " Dear John: That was an interesting item in the last Minutes about the growth of Cypraea. Wish I had been there to hear the discussion. Seems possible that a Cypraea could expand in width and height by absorbing the internal shell and building new shell outside. But it appears when it comes to expanding in length, that's a different proposition, since there's some intricate mechanism in the terminal ridge, fossula etc.

Why isn't it more reasonable to say that the shell grows in the bulla stage to its inherent maximum, then finally as an adult forms the outer lip and the growth is complete. Various shells of the same species can vary considerably in size the same as in other forms of life; and I would think " the largest Cypraea you

ever owned" which didnt have the dorsal design in adult stage, simply meant that it was to be innately a very large specimen just maturing or about to put on the finishing touches in dorsal design when it was collected.

Just a passing thought, of course, but I had to stick in my two-bits worth !

* Note* When it comes to *Cypraea* we are always glad to have the opinion of our member Steele who specializes in them. Anyway I made no claim to having solved that *Cypraea* question, and opinions of others will be appreciated.

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John Dyas Parker, The Academy of Natural Sciences of Philadelphia has given us the news from the Academy. " We have been quite busy here at the Academy. Anne Harbison and Axel Olsson have been work--ing on the last of the Fargo fossil collection while Mr. Fargo and Dr. Pilsbry have prepared the Turrid and the Circulus groups respectively. In doing the latter, Dr. Pilsbry found it necessary to review the entire East American " *Vitrinellidae*" of the Tertiary and Recent. Chuck Wurtz has been transferred to the Dept. of lymnology where he became immediately absorbed in the *Physa* problem. Dr. Jeanne Schwengel is, at present, working on the material from the Vanderbilt South Seas Expedition, to which she interrupted her study of our *Volutidae.* Allan Sollon and I have been endeavoring to carry out Vanatta's original pattern of curatorical work on the collection. An outgrowth of this work is a list of the Marine Gastropod Types which I have about half finished. Mrs. Lincoln Riddel has also been doing a deal of curatorial work. At present she is cleaning the shells in the Exotic Land Collection.

Dr. Pilsbry is leaving for Argentina on or about Dec. 15th and Anne Harbison is leaving for St. Croix a few days later, while at present it looks as though the rest of us will be here the rest of the winter other than that Dr. Olsson is again going to Peru."

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Dr. Henry A. Pilsbry who celebrated his 87th anniversary on Dec. 8 is due to leave for Buenos Aires on the 15th for several months stay. The Doctor has been very well.

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Harold Harry, Museum of Zoology, Ann Arbor has written several of his cordial letters. I had written him of having enjoyed a visit from Miss Ruth Coats of Tillamook, Oregon. " Glad to hear that Ruth was visiting you recently. I have had a long letter from Miriam Shepard which tells me of the activities in the Portland area. I see both Ruth and Miriam are listed as volunteer workers at the Portland Museum of Science and Industry, in the little circular put out by that institution. Mrs. Margaret Teare of the Buffalo Club group, spent a few days with us recently. Bruce Lee, Emil Abdel-Malek and I are busily plugging away at our various theses pproblems with Dr. van der Schalie.

Rev. C.E. Fox, is on leave in New Zealand and will not return to the Solomon Islands until April.

Captain H.S. McDonald is now stationed on Guam and the list of fine things he is collecting in living shells reminds one of a check list of the central Pacific fauna. Who was it that said shells could not be found on Guam to any extent? However, the secret seems to be that one has to really go out on the reefs to get them.

Dr. A.B. Franco just wrote us from Argentina that she expects to leave for a visit in Swotzerland and then fly back to her home in Cebu, Philippines arriving there within the next six weeks.

Mrs. E.L. Palmer, 206 Oak Hill Road, Ithaca, N.Y. Mrs. Palmer accompanied her husband Professor Palmer on a trip to New Zealand this year, and did not return until around the first of November. " We had a fine time in New Zealand and met the scientists there. They are a fine bunch of conchologists, paleontologists, and geologists. I was able to make several field trips guided by some of their best. We took a large suite of beautiful kodachromes annd got a large collection of fossils and considerable Recent shells."

Mrs. Palmer brings up another question of some interest to us all- re the quality of paper on which newly described species are published.

" May I ask you something that has been on my mind for some time- the matter of publishing new forms in your minutes ? I am one of the enthusiasts of your minutes so please do not feel that I do not approve of them and for your general material in the form which you are getting them out. You are doing a fine and helpful piece of work- one of the most practical. We do feel that the publication of new forms is sort of a horse of another color. Your publication is readily accessible and widely distributed so that does not disqualify. I am wondering about the permanency of the paper. We have had experience with regular bookpapers which have deteriorated in 50 years. One has to spend so much time in the hunting of original descriptions, the actual papers of which for some reason or other through a long time have become very scarce, that it seems considerable thought should be given to the matter of how they are published. Perhaps your large edition would take care of the matter. We would be interested in your comments on the matter."

The following will be off hand comments by John Q. Burch, editor of these mimeographed sheets, and the opinions of all others interested are solicited.

In the first place no one is more aware of the limitations of our little mimeographed paper than we are ourselves. We wish that we could publish on fine paper and in fine printing. However, the experience of science in all groups in the past century has been that original descriptions of new species are frequently reprinted. Mrs. Oldroyd gathered all of them from this coast in her work up to 1927. So it is not likely that a described form with a holotype available in one of our large institutions will become a lost or even unavailable paper.

Now to the paper. I would not care to make any of my friends now publishing in many of the accepted large periodicals unhappy, BUT my paper experts, as for example the buyer for Blake, Moffitt and Towne of Los Angeles, have advised me regarding many of these papers. Briefly, the opinion of the paper experts is this: The only paper of any degree of permancy is what is known in paper parlance as 100% rag. I have asked their opinions on various papers coming to me from large institutions on which are printed many new forms, and I wish to assure you that there are very very few of them on permanent paper. Our paper is a 100% sulphide paper but no claim that it will be permanent and in fact we seriously doubt if it will be usable 50 years hence. However, our paper will be just as permanent as that on which a host of current scientific journals are being printed. Another source of real information on paper is almost any county seat in the country. County Recorders etc. insist upon 100% rag paper in order that county records may be permanent. Of course, the cost of such 100% rag paper is beyond our financial consideration. But it seems to also be beyond a great many printed journals, some of them even come in on pulp paper.

AFRICAN, ASIATIC, AND EUROPEAN LOCALITIES OF SHELLS ILLUSTRATED IN F.C. BAKER'S " THE MOLLUSCAN FAMILY PLANORBIDAE", 1945

By Robert J. Drake
Department of Anthropology, University of New Mexico

AFRICA

Anglo-Egyptian Sudan: Behr-el-Ghazal:
Afroplanorbis sudanicus (Martens) Pl. 81: fig.3
Belgian Congo:
Afroplanorbis adowensis (Bourg.) 81:2
Belgian Congo: Lake Edward:
Biomphalaria smithi Preston 81:4

ASIA

China: Canton:
Helicorbis umbilicalis (Benson) 78: 5,6
China: Hong Kong:
Helicorbis umbilicalis (Benson) 78:7
China: Peiping:
Pingiella peipinensis (Ping and Yen) 78: 8-10
Polypylis largilliarti (Phil.) 79: 7-9
India: Calcutta:
Indoplanorbis exustus (Desh.) 79:33-35
Siberia: Saigan:
Gyraulus borealis (Westerlund) 136:39

EUROPE

England: Scarborough:
Anisus spirorbis (L.) 77:20-22
Gyraulus albus (Muller) 136:1-3
England: West Strand:
Hippeutis fontanus (Lightfoot) 79:4-6
France: Rhone River:
Planorbarius corneus (L.) 80: 22-24
Germany: Steinheim:
Poecilospira trochiformis (Stahl) 81:1
Poland: Czerniakow:
Segmentina nitida(Muller) 79: 1-3
Poland: Drewnica:
Bathyomphalus contortus (L.) 77: 23-25
Poland: Jab-Tonna:
Anisus vortex (L.) 77:19
Poland: Krolikarina:
Gyraulus albus (Muller) 77: 1-3
Poland: Warsaw:
Anisus leucostomus (Millet) 77: 16-18
Planornis planorbis (L.) 77: 26-28

In addition, shells of the following species of Old World genera are illustrated without localities:

Acrorbis petricola Odhner 72: 1-3
Anisopsis calculus (Sandberger) 81:10
Anisopsis loryi (Coquand) 81:11
Armiger crista (L.) 76:6
Choanomphalus naacki Gerstfeldt 81:7
Choanomphalus schrenckii Dybowski 81:9
Choanomphalus valvatoides Dybowski 81:8
Costorbis strauchianus (Clessin) 76:3 (con.)

Odontogyrorbis krambergeri (Halavats) 76:2
Planorbis krambergeri Halavats 76:1
Polypylis hemisphaerula (Benson) 76:5
Segmentina nitida (Muller) 76:4

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Publications Recently Received

The Nautilus , Vol. 63, No.1, July,1949. An excellent issue but none of the papers affect the fauna of this coast.

Hertlein and Strong Mollusks from the West Coast of Mexico and Central America Part VII - Zoologica vol.34: part 2. This issue of this important work is the Superfamily Tellinacea, 26 figures on one plate illustration new species. 35 pages of text. The keys to genera, subgenera and species alone make this work essential to all serious work on this group.
* Note* Copies of this paper are available from the editor- 50¢

Division of Fish and Game Fish Bulletin No. 72 Trawling Gear In California by W.L. Scofield. The different types of trawls are described in detail as well as their working. The reason this report of 60 pages and many figures is of value to us is that at least in my experience trawls were the most productive of all equipment for collecting deep water shells.

Revista De La Sociedad Malacologica " Carlos De La Torre", Vol.7, No.1, Sep. 30,1949. A number of new species are described and well figured. One paper in English by Carlos Guillermo Aguayo "The Intraspecific Units in Malacology" is one that should be read by all.

Basteria (The journal of the Malacological Society of the Netherlands) Vol. 13, No.4, 1949.
Another publication of the above society comes out in mimeographed form and is called Correspondentieblad Van De Ned. Mal. Verl. .. and in this paper appear a good many articles of real interest and value including an occasional page of figures. The issue last received was No. 33, July,1949.

Catalogo Moluscos De Cuba by C.G. Aguayo and M.L. Jaume. Another installment of this work has been received pp 551-575

Shell Notes by Frank Lyman. Vol. 2- 7,8,9. I still dont see how Frank manages to publish such a fine paper without an endowment of some kind. This issue is a beauty, and is an important contribution to conchological literature. A new species of Strombus is described by Leo A. Burry- Strombus canaliculatus, and many other plates and articles make this a far better periodical than many for which we pay a substantial subscription price.

Circulares De La Sociedad Malacologica " Carlos De La Torre". This is the mimeographed news circular published by this society. In this they list new publications and reviews of them , their actual proceedings etc. However, an occasional paper of permanent value appears in this form.

The San Diego Society of Natural History published a beautiful illustrated brochure as a part of its 75th Anniversary. The photography is excellent and illustrates the various activities of the society.

Fisheries Newslatter of Australia- issues Aug. and Oct.,1949.

In looking through this paper which is devoted to the commercial fisheries of Australia, we seldom fail to note a few items of some interest. An example is an article on the " scallop production " of Tasmania. As a shell dealer who has been trying without success to buy for cash a few hundred of these shells, it is really amusing to read that 231¼ tons of commercial scallops were marketed. We read of the production from one bay of 217,865 lbs. and almost as much from others. Furthermore we read that they are dredged and an account of the number of dredges etc. etc. Our experience in dredging Pectens from this coast indicates that almost certainly they picked up countless thousands of fine and rare specimen shells other than the scallops along with them. Of course, the specimen shell business would probably be beneath the value to interest a fishery producing for example 78,000 lbs. in one week. However, in case any of them should ever be interested in a small order of a hundred dollars or so they should have no difficulty in getting it.

Another article of some interest is an account of the Mother of Pearl business. They use the abreviation M.O.P. in discussing this industry. Again we find this of amusing interest and feel properly placed where we admit we belong , that is, in the marginal small buisance class, because we have been writing for years trying to buy a few hundred ' pairs' of really good shells of the various species of M.O.P. We are frequently quoted on a ton or a shipload of the commercial product. And, by the way, we have tried this to our sorrow. Commercial M.O.P. comes or at least came to us in all of our previous experience in all mixed valves and almost without any exception broken edges etc. It would be an impossibility to pick out a single pair fit for a specimen from an entire cargo ship full of them. However, the price per ton of this M.O.P. is also of interest. £ 350 per ton. Even at the new exchange rate this if $791 per ton F.O.B. Australia, to which the freight must be added. Maybe they are worth as much to make buttons out of as they are to shell collectors. However, a nice pair unbroken is always worth several dollars each with unusually large and fine really commanding a fancy price for an occasional pair. But the thing that makes us downright unhappy is the thought of the many super fine Cypraea,Murex and other species that we have in years gone by received from pearlers, a natural by product to them if the price of the specimen shells could be made interesting to them. It is puzzling at times to figure out why we find it impossible to get these things from Australia. We have always found it so and in the past I have purchased fine shells taken by the pearlers BUT from London, not Australia.

And also simply pondering over the shell possibilities we read an account of a huge 300 fathom Purse-Seine. This huge seine has one ton of lead sinkers on it, brings up at one haul of many tons, the net alone weighing 8 tons. BUT this is not the largest nor the deepest seine in use. There is a 600 fathom seine in use. Of course, these seines bring up rarities of mollusks that would delight any shell collector on earth, but the shells are almost without exception promptly washed overboard. Occasionally some one gets interested. During the past year a few specimens were salvaged from such fishing operations off South Africa. The results to date have only been 5 species new to science published but I understand more are coming up. Some of the things were almost priceless scientifically to our minds. And in my case at least I purchased close to $1000 worth of the shells, but I have abandoned hope of getting any of these Australian shells.

Newsview published in Auckland, New Zealand- issue of Nov.,1949.
This issue contains a long article about the collection of Miss Mavis Holloway with many illustrations and a photograph of Miss Holloway with her collection. We find this of great interest and not the least of it is our pleasure in having the picture of Miss Holloway from whom we have had many fine shells and with whom we have exchanged for a good many years. We wish we had pictures of all of our shell friends from distant parts. Of course, those who do not have my picture can just immagine a bald headed, rather fat man of the grandfatherly age of 56 and better let it go at that.

Samoa- Shell-Collector's Paradise reprinted from The Scientific Monthly, Nov. 1949 by R. Tucker Abbott. In this interesting paper are two plates illustrating species of *Lambis*(the spider conchs called *Pterocera* by most collectors). The most interesting thing though is the nomenclature. Obviously the species that I have been labelling *L. bryonia* is *L. truncata* Humphrey. *L. arthritica* is very likely a species that I have been confusing with *chiragra* , and *L. crocata* in this figure reminds me of what I may have been calling *aurantia*, but am not sure. I for one wish that Dr. Abbott would publish a revision of this group. There probably are not over a dozen species but they seem to be in great confusion in most collections. Hirase figured a number of subspecies that I at least found unworkable, no doubt because I either had too many or too few specimens.

Studies on Potential Snail Hosts of Schistosoma japonicum.I,II. Notes on the Amnicolid Snails Blanfordia,Tricula and a New Genus Fukuia from Japan, by R. Tucker Abbott. Another paper worked out with the usual precision of Dr. Abbott containing good figures, keys to species etc.

California Academy of Sciences- Academy News Letter- Announcements of the affairs of the Academy always make one wish that it was not so far from Los Angeles to the Golden Gate. For example we would have liked very much to hear Allyn G. Smith give his lecture on " Rediscovering the Farallones", and Professor George E.MacGinitie give his illustrated lecture on " Biology of the Arctic Ocean". Professor and Mrs. MacGinitie have been stationed at Point Barrow, Alaska

Archiv fur Molluskenkunde. We were pleased to almost bring our file of this fine periodical to date. The latest issue we have is Band 78, nummer 1/3, Seite 1-102, June,1949. The quality of the plates and format is fully up to the high pre war standard.

Sobre Una Rara Especie Pirenaica by Manuel Vidal y Lopez from the Boletin de la Real Sociedad Espanola de Historia Natural,Madrid, Spain.

Molluskengesellschafter alpiner Rasen in Allgau by L. Hasslein from Naturforschende Gesselschaft Augsburg.

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Our member Jack Gunning addressed the Naturalist Club at Los Angeles City College on Nov. 8. His subject was " Shells in General" and he discussed the major divisions, poison cones etc. Jack has his collection of over 1000 species on display in the Life Science Building.

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The New Zealand group in Auckland- Auckland Conchology Club have sent us the most recent bulletin. It is "Notes from a Collecting Trip by Arthur Richardson.

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Mrs. Maynard Merrill of Michigan spent a collecting holiday at Mazatlan, Sinaloa, Mexico. We hear that collecting was good and it is hoped that more of our eastern collectors will visit this coast for their winter vacations.

Mrs. Theano Wattles Case died in San Diego at the advanced age of 96. Those of us who attended the meeting of the A.M.U. at Pacific Grove year before last will recall her. She was by far the senior member present and her activity and enthusiasm was a matter of general talk. However, her specialty was Thallophyta rather in mollusks. She was probably the leading authority on her subject. Her extensive collection of marine algae has been presented to the San Diego Museum of Natural History.

Mr. Robert Henson Moses, who was born in Shrewsbury in 1871, and died on June the 13th,1949, came from a family with strong medical and zoological trends. His uncles, grandfather and other members of his family wrote extensively and were recognized as scholars. Mr. Moses was aloays an enthusiastic student of conchology with whom many of us have exchanged both specimens and books for many years. He will be sorely missed by his friends not only in his home in England but by his host of friends by correspondence.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- Nov.,1949

The November meeting of the Conchological Club of Southern California was held on Nov. 1 in our usual meeting room at the Los Angeles County Museum. President George Kanakoff called the meeting to order and Secretary Gillis being absent, Mrs. Elsie Chace was asked to act for the evening. Fifteen members and guests were present.

The Minutes of the October meeting were not at hand to be read, but will appear in the next number of the Minutes. There were no committee reports but brief accounts were given to the club field trip to Newport breakwater on Oct. 23rd. Members are reminded to send lists of species collected to the field trip chairman Mrs. John Q. Burch.

The resignation of Mrs. Harriette Gillis as secretary-trasurer was read and regretfully accepted. The secretary pro tem was instructed by unanimous vote of the club to write Mrs. Gillis that the club had accepted her resignation with deep regret, and sincerely hoped that her health would improve quickly and noticeably.

Since this was the November meeting the club decided not to fill the secretary's chib until the regular election next month.

President Kanakoff announced our regular Christmas grab bag for the next meeting. He appointed as nominating committee Mrs. E.P. Chace, Morris Caruthers, and Dr. Gregg.

In the course of general discussion John Burch passed on two collection care suggestions (1) the use of 10% D.D.T. powder instead of moth balls as protection against pests- which is very successful and at the same time odorless, and (2) a strong solution of caustic soda (Draino) to eat the animal matter out of some shells particularly olives, for thorough cleaning.

The specially introduced guest of the evening was Professor Walter Cline of Newport Beach. Professor Cline was a member of the Lorquin Natural History Club and had collected with E.P. Chace

at Santa Monica before World War I.

John Burch announced that the 1950 meeting of the A.M.U. Pacific Div. would be held at Santa Barbara Fri. to Sun., April 9,10,11. Exact address later.

As it had been impossible for Dr. S.S. Berry to come in from Redlands to give his promised paper, Dr. W.C. Gregg filled in with a preliminary report on his recent vacation in Ariz. He had 5 genera of large land snails from Arizona (1) Micrarionta which belongs primarily in the California deserts having but 5 species in Arizona (2) Sonorella , not in California, but north and east of the Colorado River- has 67 species in Arizona. Sonorelix of our California fauna is anatomically too close to Sonorella for comfort and the two probably had a common origin (3) Oreohelix 20 species in Arizona (4) Ashmunella (Polygyridae)- 19 species in southeastern Arizona (5) Holospira - 23 species in Ariz. extends eastward through southern New Mexico into Texas. Dr. Gregg's partner M.L. Walton, found one wreck of a Bulinulus but the family is very rare in Arizona. In the Chuicahua Mts. White Tail Canyon was especially interesting because 1 Sonorella and 1 Oreohelix were found on one side of the canyon and on the other the same genera but different species. Ferris's locality " Tweed Canyon" is usually marked on maps now as Stronghold Canyon but Cochise Stronghold is on the eastern slope of the mountains just opposite Stronghold Canyon. Dr. Gregg concluded by saying that he and Mr. Walton figured they had taken 20 species which they had not collected before and that their trip was a success- they had seen the wild pigs, the native peccary or javelina.

Respectfully submitted- Elsie M. Chace,
Secretary Pro Tem

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Meeting of Dec. 6th,1949

The minutes were read and approved. 34 members and guests were present. The report of the nominating committee was read and accepted by motion to close the nominations and instrict the secretary to cast a unanimous ballot. The officers for the year 1950 are:

President- George Kanakoff
Vice-President- R.N. Mayhew
Secretary-treasurer- Mrs. John Q. Burch

President Kanakoff appointed the following committees:

Program- Mr. Grau (to choose 2 members of his committee)
Hospitality,Membership- Mr. Caruthers (")
Nomenclature- Mrs. E.P. Chace
Editorial- John Q. Burch
Education- Turver, Gregg, Chace

The grab bagd was then distributed and a social period enjoyed.

Four new members were accepted, Don M. Wilson, Frank Hoover, Glenn Russell and Dr. A. Weir Bell.

Mrs. Chace gave a brief treasurers report for Mrs. Gillis showing a balance on hand of $7.85.

Mr. Grau then introduced Dr. S.S. Berry who presented a scholarly paper on Light Production in animals with particular reference to Mollusca".

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Achatina's Odyssey- by Dr. W.J. Rees, British Museum (Natural History). A very lengthy and complete article on this problem appeared in the London Times, Aug. 27,1949. This is about the most complete account of both the natural history and the distribution of this pest that has come to my attention. To reprint this entire paper would be too great a task here although it should be read by those interested. A few of the notes made will follow.

It is thought that the Achatina started on its odyssey about 1800 when it was introduced into Mauritius from East Africa. To give some idea of the extent of their depradations though one account will suffice " ... in 1910 in the Kalatura district, Ceylon. The Govennment entomologist in his official report stated:- The huge snails were to be seen- literally in millions- crawling over the ground, climbing up walls, fences, and poles, and clustered upon the trunks of trees. Some 227 snails were counted in one such cluster on the stem of a coconut tree in a length of about 6 ft. Many other large clusters were observed. They congregated in a similar manner on the tops of fence poles usually having stems of Jatroplia) erected round young coconut plants. The ground beneath the clusters was covered an inch deep with the excreta of the snails"

This kind of plague has been repeated over and over again in other countries. One of the principal reasons for its rapid dispersal was the Chinese who encouraged the snail for use a duck food in ground condition.

One rather puzzling thing to me has been the report in all articles about them of the immense size they attain- the smallest seeming to be 5 inches of those mentioned, whereas we have been receiving from many correspondents various lots of them but few measuring as much as 4 inches with most of them not over 3. These of course, were sent us by those combating the pests in the Philippine and elsewhere. It seems that an adult is about 4 years old so no doubt the specimens we have been getting in such numbers are the young, and the larger ones being more easily seen have been destroyed before.

It is said that the Japanese considered Achatina stew quite a delicacy and for this reason they scattered it. This is the first I have heard of how they cooked the things and have been a bit curious. Could hardly immagine eating one like a raw oyster.

It is said that in Hawaii they have realized that eradication of the snail is impossible. The following is a quotation from the Times article and is of interest -

The secret of Achatina's rapid multiplication lies in its biologically efficient method of reproduction. Each snail (which is hermaphrodite) can lay 50-300 eggs every two or three months from one year old, and may continue to do this for 5 years or more. The lemon-yellow eggs are about the size of dried peas and are covered with a thin shell. They are laid in loose pockets of soil or even on the surface in damp, shady undergrowth. Hatching may be over in a few days and growth is rapid in favorable circumstances. By day the young (and even the adult) prefer to remain under cover, feeding actively only at night. This makes detection and eradication difficult during the early stages of an attack when control might be possible. Under dry conditions the snail hides in the soil and secretes a thin cover over the mouth of the shell. It can aestivate for several months until the wet weather comes again.

All these features in the life of Achatina make it a difficult pest to control. Some of the methods employed to gain temporary relief may be mentioned. Achatina must have lime to build its shell, and in countries where lime is deficient in the soil some use of this factor has been made. In Ceylon, for instance, there is a lime deficiency and the snails eat lime wash on walls and wherever they can find it. Lime wash with a small admixture of calcium arsenate is effective, so are baits containing metaldehyde, for keeping down the number of snails. Achatina is to some extent canibalistic, and a crushed snail will attract others to feast on it; these in turn can be crushed to lure still other snails. The clearing of

rubbish heaps and the destruction of garbage, in and around native villages, is sound policy so far as small gardens are concerned, as it reduces the amount of food available. The leaves, flowers and fruit of trees can be protected with tarred bands fixed around the stems.

Hostile Glow-Worm- All these are but preventive measures, and the search for some biological means of control still continues. In Calcutta during the early part of this century it was noticed that in some years *Achatina* was subject to some epidemic which killed off thousands, but the nature of the disease is still unknown. It is acknowledged that the pest is not multiplying at such an alarming rate as in earlier years in Ceylon: this may be because the larva of the Indian Glow-worm (*Lamprophorus*) has acquired a taste for the snail. One female larva can account for 30 to 40 snails during its development.

The National Research Council of the United States sent a scientist to Africa to seek natural enemies of *Achatina*. He found that a small carniverous snail of the genus *Goniaxis* and a beetle of the genus *Tefflus* preyed on the giant snail in its native haunts. Biological control, is, however, in its infancy, and the American authorities are reluctant to release these natural enemies in the Pacific islands, because in the long run they might wipe out all the native snail fauna and perhaps become worse pests than *Achatina*.

Recent experiments carried out at the British Museum (Natural History) indicate that Britain has too cold a climate for *Achatina* to survive, for it needs a minimum temperature of about 75 deg. F. for it to remain active and breeding."

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* Note*- It is to be hoped that my local Chamber of Commerce does not read this, but last week I had to break at least ½ inch of ice on my dogs watering dish before he could wash down his breakfast. So if *Achatina* requires 75 deg. F. it would seem that we are much concerned about nothing insofar as introduction of *Achatina* here is concerned.

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CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA- FIELD TRIPS OF 1949

1. Dana Point Feb. 13,1949 -1.5 tide 3:44- Lists published.
2. Flat Rock Point May. 15,1949 Tide -1.1 at 5:33 A.M.
3. Balboa Breakwater Oct. 23,1949 Tide -1.0 4:25 P.M.

These field trips have been well attended. Those interested in making field trips in the future please notify the field leader Mrs. John Q. Burch, 4206 Halldale Ave., Los Angeles 37- Phone Ax 2-7965.

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The following lists of species collected on the trip to Flat Rock point have been turned in. Others are requested to send in at least any additional species.

Dick and Annette Mayhew report: Acteocina culcitella Gould, Conus californicus Hinds, Mangelia variegata Carpenter, Olivella baetica Carpenter, Hyalina californica Tomlin, Cystiscus jewetti Carp., Mitrella carinata Hinds, Aesopus chrysalloides Carp., Amphissa versicolor Dall, Epitonium tinctum Carp., Opalia insculpta Carp., Turbonilla tenuicula Gould, Turbonilla morchi Dall and Bartsch, Turbonilla pentalopha Dall and Bartsch, Odostomia navisa Dall and Bartsch, Odostomia trachis D. & B., Odostomia helena Bartsch, Odostomia eugena D. & B., Triphora pedroana Bartsch, Cerithiopsis pedroana Bartsch, Cerithiopsis diegensis Bartsch, Metaxia diadema Bartsch, Caecum californicum Dall, Caecum licalum Bartsch, Micranellum crebricinctum Carp., Fartulum bakeri Bartsch, Fartulum orcutti

Dall, Lacuna unifasciata Carp., Lacuna aurantica Carp., Lacuna marmorata Dall, Barleeia acuta Carp., Alvania acutilirata Carp., Acmea stimpsoni Stearns, Acmea californica Pfeiffer, Crepipatella lingulata Gould, Acmaea insessa Hinds, Acmaea paleacea Gould, Acmaea scabra Gould, Phasianella compta Gould, Phasianella pulloides Carp., Phasianella rubrolineata Strong, Homalopoma baculum Carp., Homalopoma carpenteri Pilsbry, Norrisia norrisii Sowerby, Teinostoma supravallata Carp., Teinostoma invallata Carp., Fissurella volcano Reeve.- Glans carpenteri Lamy, Milneria kelseyi Dall, Serridens oblonga Carp.

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Collecting notes from the field trip to the Balboa Breakwater, Oct. 23,1949- Mrs. John Q. Burch reported-
Polinicea recluzianus(Deshayes), Polinicea altus Arnold, Mytilus edulis diegensis Coe, Tegula ligulata (Menke), Norrisia norrisii Sowerby, Pterorhytis nuttallii (Conrad), Pterynotus festivus (Hinds Acanthina spirata Blainville, Conus californicus Hinds, Ocenebra poulsoni (Carpenter), Amphissa versicolor Dall, Mitrella carinata Hinds, Melampus olivaceus Carp., Cerithidea californica (Haldeman), Polinices lewisii Gould, Mitrella carinata gausapata (Gould), Nassarous tegulus (Reeve), Crepidula onyx Sowerby, Acmaea limatula Carp., Crucibulum spinosum Sowerby, Megathura crenulata Pilsbry, Fissurella volcano Reeve, Sinum scopulosum (Conrad), Macoma nasuta Conrad,Sanguinolaria nuttallii Conrad,Pododesmus macroschisma Desh., Tagelus subteres (Conrad), Tagelus californianus (Conrad), Ostrea lurida Carpenter, Donax californica Conrad, Tivela stultorum Mawe, Donax gouldii Dall,Apolymetis biangulatus Salisbury, Saxidomus nuttalli Conrad, Laevicardium substriatum (Conrad), Trachycardium quadragenarium (Conrad), Chione undatella (Sowerby), Protothaca staminea (Conrad), Protothaca laciniata (Carp.), Heterodonax bimaculata (Linne), Zirfaea pilsbryi Lowe,Pecten (Plagioctenium) circularis aequisulcatus (Carpenter), Hinnites giganteus Gray, Chama pellucida Sowerby,Pseudochama exogyra Conrad, Kelletia kelletii Forbes,Tellina bodegensis Hinds, Mactra californica Conrad, Olivella baetica Carp.,Olivella biplicata Sowerby, Haminoea vesicula (Gould), Kellia laperousii Deshayes, Acteocina culcitella (Gould), Saxicava arctica Linne,Acmaea insessa Hinds, Crepipatella lingulata (Gould), - Dendraster excentricus Eschscholtz,Pisaster capitaneus Stimpson, Livona cordiformis, Astropecten sp.

Mr. and Mrs. E.P. Chace report the following:
Acmaea scabra, Acmaea conus Test, Acmaea digitalis Esch,, Acmaea limatula Carp., Norrisia norrisii with Crepidula onyx on it, Crepidula lingulata Gld., Megathura crenulata Pils. also with Cl onyx on it; Fissurella volcano Reeve, Purpura nuttallii (old name) all small; Murex festiva, Pyrene carinata, Amphissa versicolor,Murex gemma, *Tylodina fungina*, the high spot of the day, Kellettia kellettii-young, Philobrya setosa , Hinnites giganteus, Mytilus oedulis, Volsella capax, Chama exogyra, one live but wornn specimen, Chama pellucida, several tiny ones, Calliostochiton decoratus (2), Lepidochitona hartwegi, Mopalia muscosa, Nuttallina scabra.

Mr. and Mrs. R.N. Mayhew reported:-
Pseudochama exogyra, Megathura crenulata,Kellattia kellettii- and also reported *Epidermis scarificata*

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Mr. Don Fisher of the Yorkshire Conchological Society recently sent us an interesting report by Dr. Lloyd before their society on the conditions in their sewage purification system. The report is to lengthy to repeat but Mr. Fisher reports " In 7 cu. inches taken from the dredged heaps I counted 677 *Lymnaea peregra* and 5 *L. truncatula*". The heaps were between 1 and 2 cubic feet so he

computed the number of shells was between 150 thousand and a quantity of a million in each heap. It is safe to assume that the population in the filters as being several millions.

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NOTICES

The next meeting of the Conchological Club of Southern California will be held Jan.3rd, 1950 at 7:30 P.M. at the Los Angeles County Museum. A program of interest to all will be presented. We hope that all old and new members will attend as well as all others who are interested. Mrs. John Q. Burch, Secretary, 4206 Halldale,Los Angeles

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As president of the American Malacological Union, Pacific Division, I wish to announce that the 1950 meeting will be held at the Barbara Hotel in Santa Barbara, California April 7,8,9. Those wishing to attend should make their reservations direct with the Barbara Hotel, and are also requested to advise the secretary, Dr. W.O. Gregg, 2200 S. Harvard Blvd., Los Angeles 7.

Those interested in preparing papers to be read at the meeting are asked to write the program chairman, Mrs. E.P. Chace, 24205 Eshelman Ave., Lomita, Calif. and give her the subject, the approximate time required, and any special equipment needed.

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